OIPE JC152
NOV 16 2001
PATENT & TRADEMARK OFFICE

SEQUENCE LISTING

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BRODEUR, Bernard

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Thr Ser His Gly Asp His Tyr His Tyr Tyr Asn Gly Lys Val Pro Tyr
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Asp Ala Leu Phe Ser Glu Glu Leu Leu Met Lys Asp Pro Asn Tyr Gln
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Lys Val Asp Gly Lys Tyr Tyr Val Tyr Leu Lys Asp Ala Ala His Ala
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Asp Asn Val Arg Thr Lys Asp Glu Ile Asn Arg Gln Lys Gln Glu His
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Val Lys Asp Asn Glu Lys Val Asn Ser Asn Val Ala Val Ala Arg Ser
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Gln Gly Arg Tyr Thr Thr Asn Asp Gly Tyr Val Phe Asn Pro Ala Asp
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Ile Ile Glu Asp Thr Gly Asn Ala Tyr Ile Val Pro His Gly Gly His
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Tyr His Tyr Ile Pro Lys Ser Asp Leu Ser Ala Ser Glu Leu Ala Ala
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Ala Lys Ala His Leu Ala Gly Lys Asn Met Gln Pro Ser Gln Leu Ser
225 230 235 240
Tyr Ser Ser Thr Ala Ser Asp Asn Asn Thr Gln Ser Val Ala Lys Gly
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Ser Thr Ser Lys Pro Ala Asn Lys Ser Glu Asn Leu Gln Ser Leu Leu
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Lys Glu Leu Tyr Asp Ser Pro Ser Ala Gln Arg Tyr Ser Glu Ser Asp
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Gly Leu Val Phe Asp Pro Ala Lys Ile Ile Ser Arg Thr Pro Asn Gly
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Val Ala Ile Pro His Gly Asp His Tyr His Phe Ile Pro Tyr Ser Lys
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Thr Gly Ser Thr Val Ser Thr Asn Ala Lys Pro Asn Glu Val Val Ser
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Ser Leu Gly Ser Leu Ser Ser Asn Pro Ser Ser Leu Thr Thr Ser Lys
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Glu Leu Ser Ser Ala Ser Asp Gly Tyr Ile Phe Asn Pro Lys Asp Ile
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Val Glu Glu Thr Ala Thr Ala Tyr Ile Val Arg His Gly Asp His Phe
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His Tyr Ile Pro Lys Ser Asn Gln Ile Gly Gln Pro Thr Leu Pro Asn
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Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser
690 695 700
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Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly
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740 745 750
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755 760 765
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770 775 780
Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu
785 790 795 800
Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu
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Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu
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Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu
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850 855 860
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Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp
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Lys Asp Ser Asp Ile Val Asn Glu Ile Lys Gly Gly Tyr Val Ile Lys
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Gln His Arg Glu Gly Gly Thr Ser Ala Asn Asp Gly Ala Val Ala Phe
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Ala Arg Ser Gln Gly Arg Tyr Thr Thr Asp Asp Gly Tyr Ile Phe Asn
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Ala Ser Asp Ile Ile Glu Asp Thr Gly Asp Ala Tyr Ile Val Pro His
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Gly Asp His Tyr His Tyr Ile Pro Lys Asn Glu Leu Ser Ala Ser Glu
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Trp Val Pro Ser Val Ser Asn Pro Gly Thr Thr Asn Thr Asn Thr Ser
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595 600 605
His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr
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785 790 795 800
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Thr Ser His Gly Asp His Tyr His Tyr Tyr Asn Gly Lys Val Pro Tyr
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Ile Ser Glu Glu Leu Leu Met Lys Asp Pro Asn Tyr Gln
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245 250 255
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gaaagttatg ggatgaagct agaaaatgtc ttgtttaata tggacggaac aattgaatta
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 35 40 45
Gln Ile Val Ile Lys Ile Thr Asp Gln Gly Tyr Val Thr Ser His Gly
 50 55 60
Asp His Tyr His Tyr Tyr Asn Gly Lys Val Pro Tyr Asp Ala Leu Phe
65 70 75 80
Ser Glu Glu Leu Leu Met Lys Asp Pro Asn Tyr Gln Leu Lys Asp Ala
 85 90 95
Asp Ile Val Asn Glu Val Lys Gly Gly Tyr Ile Ile Lys Val Asp Gly
 100 105 110
Lys Tyr Tyr Val Tyr Leu Lys Asp Ala Ala His Ala Asp Asn Val Arg
 115 120 125
Thr Lys Asp Glu Ile Asn Arg Gln Lys Gln Glu His Val Lys Asp Asn
 130 135 140
Glu Lys Val Asn Ser Asn Val Ala Val Ala Arg Ser Gln Gly Arg Tyr
145 150 155 160
Thr Thr Asn Asp Gly Tyr Val Phe Asn Pro Ala Asp Ile Ile Glu Asp
 165 170 175
Thr Gly Asn Ala Tyr Ile Val Pro His Gly Gly His Tyr His Tyr Ile
 180 185 190
Pro Lys Ser Asp Leu Ser Ala Ser Glu Leu Ala Ala Ala Lys Ala His
 195 200 205
Leu Ala Gly Lys Asn Met Gln Pro Ser Gln Leu Ser Tyr Ser Ser Thr
 210 215 220
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
225 230 235 240
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
 245 250 255
Glu Ser Gly Phe Val Met Ser His Gly Asp His Asn His Tyr Phe Phe
 260 265 270
Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu
 275 280 285
Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His
 290 295 300
Glu Gln Asp Tyr Pro Ser Asn Ala Lys Glu Met Lys Asp Leu Asp Lys
305 310 315 320
Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys
 325 330 335
Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro
 340 345 350
His Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val
 355 360 365

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Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu
    370                 375                 380
Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu
385                 390                 395                 400
Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn
                405                 410                 415
Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro
            420                 425                 430
Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr
        435                 440                 445
Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu
    450                 455                 460
Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro
465                 470                 475                 480
Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val
                485                 490                 495
Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met
            500                 505                 510
Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu
        515                 520                 525
Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val
    530                 535                 540
Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr
545                 550                 555                 560
Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr
                565                 570                 575
Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala
            580                 585                 590
Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu
        595                 600                 605
Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg
    610                 615                 620
Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro
625                 630                 635                 640
Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn
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            660                 665                 670
Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu
        675                 680                 685
Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser
    690                 695                 700
Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro
705                 710                 715                 720
Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr
                725                 730                 735
Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu
            740                 745                 750
Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp
        755                 760                 765
Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu
    770                 775                 780
Asp Ser Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys
785                 790                 795                 800
Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile
                805                 810                 815
Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val
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Ile Lys Lys Asn Leu Leu Ile Ser
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Asp Pro Asn Tyr Gln Leu Lys Asp Ala Asp Ile Val Asn Glu Val Lys
35 40 45
Gly Gly Tyr Ile Ile Lys Val Asp Gly Lys Tyr Tyr Val Tyr Leu Lys
50 55 60
Asp Ala Ala His Ala Asp Asn Val Arg Thr Lys Asp Glu Ile Asn Arg
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Gln Lys Gln Glu His Val Lys Asp Asn Glu Lys Val Asn Ser
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<210> 12
<211> 42
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<220>
<223> 7G11.7

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<212> PRT
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<223> 7G11.9

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Pro Ser Pro Ser Leu Pro Ile
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<210> 14
<211> 36
<212> PRT
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<223> 4D3.4

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20 25 30
Val Leu Phe Asn
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<210> 15
<211> 24
<212> PRT
<213> Unknown

<220>
<223> 8E3.1

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Lys Asn Leu Ser Asp Phe Ile Ala
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<210> 16
<211> 35
<212> PRT
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<220>
<223> 1G2.2

<400> 16
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 1 5 10 15
Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp
 20 25 30
Phe Ile Ala
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<210> 17
<211> 57
<212> PRT
<213> Unknown

<220>
<223> 10C12.7

<400> 17
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Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
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 35 40 45
Lys Lys Asn Leu Ser Asp Phe Ile Ala
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<210> 18
<211> 40
<212> PRT
<213> Unknown

<220>
<223> 14F6.3

<400> 18
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Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro
 20 25 30
Thr Val Asp Pro Val Gln Glu Lys
 35 40

<210> 19
<211> 78
<212> PRT
<213> Unknown

<220>
<223> B12D8.2

<400> 19
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Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys
 20 25 30
Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala Asp Pro Ile
 35 40 45
Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu
 50 55 60
Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn
65 70 75

<210> 20
<211> 51
<212> PRT
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<220>
<223> 7F4.1

<400> 20
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Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu
 20 25 30
Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr
 35 40 45
Thr Gly Glu
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<210> 21
<211> 29
<212> PRT
<213> Unknown

<220>
<223> 10D7.5

<400> 21
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<210> 22
<211> 86
<212> PRT
<213> Unknown

<220>
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Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro
 20 25 30

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        35                  40                  45
Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu
    50                  55                  60
Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala
65                  70                  75                  80
Thr Val Lys Tyr Tyr Val
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<223> 11B8.4

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            20                  25                  30
Asn Gly Phe Gly Asn Ala Ser Asp His
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<210> 24
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<212> PRT
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            20                  25                  30
Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn
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Gln Pro Ala Pro Ile
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<210> 26
<211> 33
<212> DNA
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<220>
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<210> 27
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<212> DNA
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<210> 29
<211> 24
<212> DNA
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<220>
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<400> 30
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<210> 31
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<212> DNA
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<210> 32

<211> 37
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<400> 32
gacgctcgag ggcattacct ggataatcct gttcatg
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<210> 33
<211> 33
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<400> 33
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<210> 34
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<212> DNA
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<400> 34
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<210> 35
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<212> DNA
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<400> 36
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<210> 39
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<400> 40
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<210> 41
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<400> 41
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<210> 42
<211> 26
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<210> 43
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<210> 44
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<210> 45
<211> 33
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<400> 45
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<210> 46
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<210> 47
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<210> 48
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<210> 49
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<210> 50
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<400> 50
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<210> 51
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<400> 51
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<210> 55
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<400> 56
cgccaagctt tagcgttacc aaaaccatta tc
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<210> 57
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<212> DNA
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<400> 57
gtattagatc tgttcctatg aacttggtcg tcacca
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<210> 58
<211> 28
<212> DNA
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<400> 58
cgcctctaga ctactgtata ggagccgg
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<210> 59
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<212> DNA
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<212> DNA
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<210> 63
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<210> 65
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<400> 65
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<210> 66
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<212> DNA
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<400> 66
catgccatgg atattcttgc cttcttagct cc
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<210> 67
<211> 38
<212> DNA
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<223> HAMJ 404

<400> 67
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<210> 68
<211> 34
<212> DNA
<213> Unknown

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<400> 68
gatgcatatg aatatgcaac cgagtcagtt aagc
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<210> 69
<211> 31
<212> DNA
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<223> HAMJ 465

<400> 69
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<210> 70
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<212> DNA
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<400> 70
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<210> 71
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<212> DNA
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<400> 71
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<210> 72
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<212> DNA
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<400> 214
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<210> 215
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<400> 216
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Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
 35 40 45
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
 50 55 60
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
65 70 75 80
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
 85 90 95
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
 100 105 110
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
 115 120 125
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
 130 135 140
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
145 150 155 160
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
 165 170 175
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
 180 185 190
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly

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Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
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Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
225                 230                 235                 240
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
                245                 250                 255
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
            260                 265                 270
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
        275                 280                 285
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
    290                 295                 300
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
305                 310                 315                 320
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
                325                 330                 335
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
            340                 345                 350
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
        355                 360                 365
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
    370                 375                 380
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
385                 390                 395                 400
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
                405                 410                 415
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
            420                 425                 430
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
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Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
    450                 455                 460
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
465                 470                 475                 480
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
                485                 490                 495
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
            500                 505                 510
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
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Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
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 35 40 45
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
 50 55 60
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
65 70 75 80
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
 85 90 95
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
 100 105 110
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
 115 120 125
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
 130 135 140
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
145 150 155 160
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
 165 170 175
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
 180 185 190
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
 195 200 205
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
 210 215 220
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
225 230 235 240
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
 245 250 255
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
 260 265 270
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
 275 280 285
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
 290 295 300
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
305 310 315 320
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
 325 330 335
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn

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            340                 345                 350
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
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Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
    370                 375                 380
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
385                 390                 395                 400
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
                405                 410                 415
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
            420                 425                 430
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
        435                 440                 445
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
    450                 455                 460
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
465                 470                 475                 480
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
                485                 490                 495
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
            500                 505                 510
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
        515                 520                 525
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
    530                 535                 540
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
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Lys Lys Asn Leu Ser Asp Phe Ile Ala
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Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
        35                  40                  45
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
    50                  55                  60
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
65                  70                  75                  80
Gly Asp Gly Thr Ser Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
                85                  90                  95
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
            100                 105                 110
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
        115                 120                 125
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
    130                 135                 140
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
145                 150                 155                 160
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
                165                 170                 175
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
            180                 185                 190
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
        195                 200                 205
```

```
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
    210                 215                 220
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
225                 230                 235                 240
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
                245                 250                 255
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
            260                 265                 270
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
        275                 280                 285
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
    290                 295                 300
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
305                 310                 315                 320
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
                325                 330                 335
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
            340                 345                 350
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
        355                 360                 365
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
    370                 375                 380
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
385                 390                 395                 400
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
                405                 410                 415
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
            420                 425                 430
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
        435                 440                 445
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
    450                 455                 460
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
465                 470                 475                 480
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
                485                 490                 495
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
            500                 505                 510
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
        515                 520                 525
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
    530                 535                 540
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
545                 550                 555                 560
Lys Lys Asn Leu Ser Asp Phe Ile Ala
                565
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<210> 257
<211> 819
<212> DNA
<213> Unknown

<220>
<223> NEW43 gene

<400> 257
atgcaaatta cctacactga tgatgagatt caggtagcca agttggcagg caagtacaca
60
acagaagacg gttatatctt tgatactagt tggattaaaa aagatagttt gtctgaagct
120
gagagagcgg cagcccaggc ttatgctaaa gagaaaggtt tgacccctcc ttcgacagac
180
caccaggatt caggaaatac tgaggcaaaa ggagcagaag ctatctacaa ccgcgtgaaa
240
gcagctaaga aggtgccact tgatcgtatg ccttacaatc ttcagtatac tgtagaagtc

300
aaaaacggta gtttaatcat acctcattat gaccattacc ataacatcaa atttgagtgg
360
tttgacgaag gcctttatga ggcacctaag gggtatagtc ttgaggatct tttggcgact
420
gtcaagtact atgtcgaacc gcggaacgct agtgaccatg ttcgtaaaaa taaggcagac
480
caagatagta aacctgatga agataaggaa catgatgaag taagtgagcc aactcaccct
540
gaatctgatg aaaaagagaa tcacgctggt ttaaatcctt cagcagataa tctttataaa
600
ccaagcactg atacggaaga gacagaggaa gaagctgaag ataccacaga tgaggctgaa
660
attcctggta cccctagtat tagacaaaat gctatggaga cattgactgg tctaaaaagt
720
agtcttcttc tcggaacgaa agataataac actatttcag cagaagtaga tagtctcttg
780
gctttgttaa aagaaagtca accggctcct atacagtag
819

<210> 258
<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW43 polypeptide

<400> 258
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
 20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
 35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
 50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
 85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His
 100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
 115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
 130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
 165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
 180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
 195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
 210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
 245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
 260 265 270

<210> 259

<211> 36
<212> DNA
<213> Unknown

<220>
<223> HAMJ 490

<400> 259
ccgaattcca tatgcaaatt acctacactg atgatg
36

<210> 260
<211> 29
<212> DNA
<213> Unknown

<220>
<223> HAMJ 491

<400> 260
ggactagtat caaagatata accgtcttc
29

<210> 261
<211> 33
<212> DNA
<213> Unknown

<220>
<223> HAMJ 492

<400> 261
ggactagttg gattaaaaaa gatagtttgt ctg
33

<210> 262
<211> 32
<212> DNA
<213> Unknown

<220>
<223> HAMJ 493

<400> 262
ttcccgcggt tcgacatagt acttgacagt cg
32

<210> 263
<211> 29
<212> DNA
<213> Unknown

<220>
<223> HAMJ 494

<400> 263
ttcccgcgga acgctagtga ccatgttcg
29

<210> 264
<211> 31
<212> DNA
<213> Unknown

<220>

<223> HAMJ 495

<400> 264
cggggtacca ggaatttcag cctcatctgt g
31

<210> 265
<211> 36
<212> DNA
<213> Unknown

<220>
<223> HAMJ 496

<400> 265
cccggtaccc ctagtattag acaaaatgct atggag
36

<210> 266
<211> 29
<212> DNA
<213> Unknown

<220>
<223> HAMJ 583

<400> 266
ggatcccggg aggtatgatt aaactaccg
29

<210> 267
<211> 34
<212> DNA
<213> Unknown

<220>
<223> HAMJ 584

<400> 267
catgcccggg aacatcaaat ttgagtggtt tgac
34

<210> 268
<211> 37
<212> DNA
<213> Unknown

<220>
<223> HAMJ 610

<400> 268
cttgatcgac atatgttggc aggcaagtac acaacag
37

<210> 269
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 497

<400> 269
aacggtagtt taatcatacc ttcttatgac cattaccata acatc
45

<210> 270
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 498

<400> 270
gatgttatgg taatggtcat aagaaggtat gattaaacta ccgtt
45

<210> 271
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 499

<400> 271
aatcatacct tcttatgact cttaccataa catcaaattt gagtg
45

<210> 272
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 500

<400> 272
cactcaaatt tgatgttatg gtaagagtca taagaaggta tgatt
45

<210> 273
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 501

<400> 273
taccttctta tgactcttac tctaacatca aatttgagtg gtttg
45

<210> 274
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 502

<400> 274
caaaccactc aaatttgatg ttagagtaag agtcataaga aggta
45

<210> 275
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 530

<400> 275
aatcatacct cattatgact cttaccataa catcaaattt gagtg
45

<210> 276
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 531

<400> 276
cactcaaatt tgatgttatg gtaagagtca taatgaggta tgatt
45

<210> 277
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 532

<400> 277
tacctcatta tgaccattac tctaacatca aatttgagtg gtttg
45

<210> 278
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 533

<400> 278
caaaccactc aaatttgatg ttagagtaat ggtcataatg aggta
45

<210> 279
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 569

<400> 279
tacctcatta tgactcttac tctaacatca aatttgagtg gtttg
45

<210> 280
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 570

<400> 280

caaaccactc aaatttgatg ttagagtaag agtcataatg aggta
45

<210> 281
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 571

<400> 281
taccttctta tgaccattac tctaacatca aatttgagtg gtttg
45

<210> 282
<211> 44
<212> DNA
<213> Unknown

<220>
<223> HAMJ 572

<400> 282
aaaccactca aatttgatgt tagagtaatg gtcataagaa ggta
44

<210> 283
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 573

<400> 283
aacggtagtt taatcatacc ttctaaagac cattaccata acatc
45

<210> 284
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 574

<400> 284
gatgttatgg taatggtctt tagaaggtat gattaaacta ccgtt
45

<210> 285
<211> 46
<212> DNA
<213> Unknown

<220>
<223> HAMJ 575

<400> 285
cggtagttta atcatacctc ataaggactc ttaccataac atcaaa
46

<210> 286
<211> 46

<212> DNA
<213> Unknown

<220>
<223> HAMJ 576

<400> 286
tttgatgtta tggtaagagt ccttatgagg tatgattaaa ctaccg
46

<210> 287
<211> 46
<212> DNA
<213> Unknown

<220>
<223> HAMJ 577

<400> 287
aacggtagtt taatcatacc tgaccattac cataacatca aatttg
46

<210> 288
<211> 46
<212> DNA
<213> Unknown

<220>
<223> HAMJ 578

<400> 288
caaatttgat gttatggtaa tggtcaggta tgattaaact accgtt
46

<210> 289
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 579

<400> 289
aacggtagtt taatcatacc ttaccataac atcaaatttg agtgg
45

<210> 290
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 580

<400> 290
ccactcaaat ttgatgttat ggtaaggtat gattaaacta ccgtt
45

<210> 291
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 581

<400> 291
accggtagtt taatcatacc taacatcaaa tttgagtggt ttgac
45

<210> 292
<211> 45
<212> DNA
<213> Unknown

<220>
<223> HAMJ 582

<400> 292
gtcaaaccac tcaaatttga tgttaggtat gattaaacta ccgtt
45

<210> 293

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 60

<400> 293
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
 20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
 35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
 50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
 85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
 100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
 115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
 130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
 165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
 180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
 195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
 210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
 245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
 260 265 270

<210> 294

<211> 272

<212> PRT
<213> Unknown

<220>
<223> NEW 61

<400> 294
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
 20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
 35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
 50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
 85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp Ser
 100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
 115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
 130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
 165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
 180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
 195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
 210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
 245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
 260 265 270

<210> 295

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 62

<400> 295
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
 20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
 35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
 50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
 85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His

```
            100                 105                 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 296

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 80

<400> 296

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1                5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
```

260 265 270

<210> 297

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 81

<400> 297
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
100 105 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270

<210> 298

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 82

<400> 298
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60

```
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp Ser
            100                 105                 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 299

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 83

<400> 299

```
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
            100                 105                 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
```

```
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 300

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 84

<400> 300

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Lys Asp His
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 301

<211> 272
<212> PRT
<213> Unknown

<220>
<223> NEW 85

<400> 301

```
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
```

```
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Lys Asp Ser
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 302

<211> 270
<212> PRT
<213> Unknown

<220>
<223> NEW 88D1

<400> 302

```
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asp His Tyr His
            100                 105                 110
Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys
        115                 120                 125
Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu
    130                 135                 140
Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp
145                 150                 155                 160
Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr
                165                 170                 175
His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser
```

```
            180                 185                 190
Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu
        195                 200                 205
Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser
    210                 215                 220
Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu
225                 230                 235                 240
Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser
                245                 250                 255
Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

<210> 303

<211> 268
<212> PRT
<213> Unknown

<220>
<223> NEW 88D2

<400> 303

```
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Tyr His Asn Ile
            100                 105                 110
Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr
        115                 120                 125
Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg
    130                 135                 140
Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys
145                 150                 155                 160
Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro
                165                 170                 175
Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp
            180                 185                 190
Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala
        195                 200                 205
Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg
    210                 215                 220
Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu
225                 230                 235                 240
Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu
                245                 250                 255
Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265
```

<210> 304

<211> 266
<212> PRT
<213> Unknown

<220>

<223> NEW 88

<400> 304
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
100 105 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
115 120 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
130 135 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145 150 155 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
165 170 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
180 185 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
195 200 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
210 215 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225 230 235 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
245 250 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265

<210> 305

<400> 305
000

<210> 306

<400> 306
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<400> 307
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<210> 326

<400> 326
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<210> 327
<211> 41
<212> DNA
<213> Unknown

<220>
<223> HAMJ 564

<400> 327
atatgggccc caaattacct acactgatga tgagattcag g
41

<210> 328
<211> 43
<212> DNA
<213> Unknown

<220>
<223> HAMJ 556

<400> 328
ataagaatgc ggccgcctac tgtataggag ccggttgact ttc
43

<210> 329
<211> 33
<212> DNA
<213> Unknown

<220>
<223> HAMJ 489

<400> 329
ccgaattcca tatgcaaatt gggcaaccga ctc
33

<210> 330
<211> 29
<212> DNA
<213> Unknown

<220>
<223> HAMJ 559

<400> 330
atatgggccc caaattgggc aaccgactc
29

<210> 331
<211> 41
<212> DNA
<213> Unknown

<220>
<223> HAMJ 557

<400> 331
ataagaatgc ggccgcttac gctatgaaat cagataaatt c
41

<210> 332

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 94

<400> 332
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
 20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
 35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
 50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
 85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
 100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
 115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
 130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
 165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
 180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
 195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
 210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
 245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
 260 265 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
 275 280 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
 290 295 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305 310 315 320
Glu Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe
 325 330 335

```
Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu
            340                 345                 350
Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His
        355                 360                 365
Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys
    370                 375                 380
Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys
385                 390                 395                 400
Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro
                405                 410                 415
Ser Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val
            420                 425                 430
Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu
        435                 440                 445
Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu
    450                 455                 460
Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn
465                 470                 475                 480
Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro
                485                 490                 495
Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr
            500                 505                 510
Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu
        515                 520                 525
Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro
    530                 535                 540
Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val
545                 550                 555                 560
Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met
                565                 570                 575
Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu
            580                 585                 590
Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val
        595                 600                 605
Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr
    610                 615                 620
Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr
625                 630                 635                 640
Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala
                645                 650                 655
Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu
            660                 665                 670
Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg
        675                 680                 685
Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro
    690                 695                 700
Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn
705                 710                 715                 720
Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val
                725                 730                 735
Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu
            740                 745                 750
Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser
        755                 760                 765
Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro
    770                 775                 780
Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr
785                 790                 795                 800
Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu
                805                 810                 815
Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp
            820                 825                 830
Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu
        835                 840                 845
Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys
```

```
    850                 855                 860
Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile
865                 870                 875                 880
Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val
                885                 890                 895
Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
            900                 905
```

<210> 333

<211> 900
<212> PRT
<213> Unknown

<220>
<223> VP 108

<400> 333

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
```

```
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala Gly Pro Gln Ile Thr Tyr Thr
625                 630                 635                 640
Asp Asp Glu Ile Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu
                645                 650                 655
Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile Lys Lys Asp Ser Leu Ser
            660                 665                 670
Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu
        675                 680                 685
Thr Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys
    690                 695                 700
Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro
705                 710                 715                 720
Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn
                725                 730                 735
Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly
            740                 745                 750
Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr
        755                 760                 765
Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys
    770                 775                 780
Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp
785                 790                 795                 800
Glu Val Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His
                805                 810                 815
Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp
            820                 825                 830
Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu
        835                 840                 845
Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr
    850                 855                 860
Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile
865                 870                 875                 880
Ser Ala Glu Val Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro
                885                 890                 895
```

Ala Pro Ile Gln
900

<210> 334

<211> 900
<212> PRT
<213> Unknown

<220>
<223> VP 109

<400> 334
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
100 105 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
115 120 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
130 135 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145 150 155 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
165 170 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
180 185 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
195 200 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
210 215 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225 230 235 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
245 250 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln Gly Pro Gln Ile Gly Gln
260 265 270
Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu Pro
275 280 285
Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr Gly
290 295 300
Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val Met
305 310 315 320
Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys Lys Asp Leu Thr Glu
325 330 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
340 345 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
355 360 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
370 375 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385 390 395 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser Gly Asp His His His
405 410 415

```
Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His
            420                 425                 430
Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu
        435                 440                 445
Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu
    450                 455                 460
Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly
465                 470                 475                 480
Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu
                485                 490                 495
Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu
            500                 505                 510
Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala
        515                 520                 525
Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr
    530                 535                 540
Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe
545                 550                 555                 560
Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe
                565                 570                 575
Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe
            580                 585                 590
Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe
        595                 600                 605
His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys
    610                 615                 620
Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn
625                 630                 635                 640
Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser
                645                 650                 655
Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp
            660                 665                 670
Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn
        675                 680                 685
Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val
    690                 695                 700
Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr
705                 710                 715                 720
Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys
                725                 730                 735
Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met
            740                 745                 750
Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys
        755                 760                 765
Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn
    770                 775                 780
Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln
785                 790                 795                 800
Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu
                805                 810                 815
Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro
            820                 825                 830
Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu
        835                 840                 845
Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala
    850                 855                 860
Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr
865                 870                 875                 880
Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser
                885                 890                 895
Asp Phe Ile Ala
            900
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<210> 335

<211> 900
<212> PRT
<213> Unknown

<220>
<223> VP 110
<400> 335

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
        275                 280                 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
    290                 295                 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305                 310                 315                 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
                325                 330                 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
            340                 345                 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
        355                 360                 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
    370                 375                 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385                 390                 395                 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His
                405                 410                 415
Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His
            420                 425                 430
Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu
        435                 440                 445
Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu
    450                 455                 460
```

```
Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly
465                 470                 475                 480
Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu
                485                 490                 495
Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu
            500                 505                 510
Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala
        515                 520                 525
Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr
    530                 535                 540
Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe
545                 550                 555                 560
Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe
                565                 570                 575
Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe
            580                 585                 590
Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe
        595                 600                 605
His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys
    610                 615                 620
Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn
625                 630                 635                 640
Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser
                645                 650                 655
Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp
            660                 665                 670
Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn
        675                 680                 685
Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val
    690                 695                 700
Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr
705                 710                 715                 720
Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys
                725                 730                 735
Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met
            740                 745                 750
Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys
        755                 760                 765
Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn
    770                 775                 780
Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln
785                 790                 795                 800
Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu
                805                 810                 815
Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro
            820                 825                 830
Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu
        835                 840                 845
Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala
    850                 855                 860
Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr
865                 870                 875                 880
Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser
                885                 890                 895
Asp Phe Ile Ala
            900
```

<210> 336

<211> 894
<212> PRT
<213> Unknown

<220>
<223> VP 111

<400> 336
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
275 280 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
290 295 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305 310 315 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
325 330 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
340 345 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
355 360 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
370 375 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385 390 395 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu
405 410 415
His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe
420 425 430
Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr
435 440 445
Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe
450 455 460
Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe
465 470 475 480
Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val
485 490 495
Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys

```
            500                 505                 510
Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln
        515                 520                 525
Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp
    530                 535                 540
Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu
545                 550                 555                 560
Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly
                565                 570                 575
Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr
            580                 585                 590
Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu
        595                 600                 605
Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu
    610                 615                 620
Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe
625                 630                 635                 640
Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val
                645                 650                 655
Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro
            660                 665                 670
Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys
        675                 680                 685
Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser
    690                 695                 700
Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr
705                 710                 715                 720
Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly
                725                 730                 735
Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu
            740                 745                 750
Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr
        755                 760                 765
Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly     770
775                 780
Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro
785                 790                 795                 800
Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu
                805                 810                 815
Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser
            820                 825                 830
Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro
        835                 840                 845
Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu
    850                 855                 860
Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro
865                 870                 875                 880
Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885                 890
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<210> 337

<211> 894
<212> PRT
<213> Unknown

<220>
<223> VP 112

<400> 337

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
```

```
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
            100                 105                 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
        115                 120                 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
    130                 135                 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145                 150                 155                 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
                165                 170                 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
            180                 185                 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
        195                 200                 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
    210                 215                 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225                 230                 235                 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
                245                 250                 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln Gly Pro Gln Ile Gly Gln
            260                 265                 270
Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu Pro
        275                 280                 285
Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr Gly
    290                 295                 300
Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val Met
305                 310                 315                 320
Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala
                325                 330                 335
Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser
            340                 345                 350
Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys
        355                 360                 365
Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln
    370                 375                 380
Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala
385                 390                 395                 400
Ile Ile Tyr Pro His Gly Asp His His His Ala Asp Pro Ile Asp Glu
                405                 410                 415
His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe
            420                 425                 430
Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr
        435                 440                 445
Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe
    450                 455                 460
Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe
465                 470                 475                 480
Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val
                485                 490                 495
Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys
            500                 505                 510
Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln
        515                 520                 525
Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp
    530                 535                 540
Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu
545                 550                 555                 560
```

```
Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly
                565                 570                 575
Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr
            580                 585                 590
Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu
        595                 600                 605
Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu
    610                 615                 620
Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe
625                 630                 635                 640
Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val
                645                 650                 655
Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro
            660                 665                 670
Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys
        675                 680                 685
Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser
    690                 695                 700
Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr
705                 710                 715                 720
Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly
                725                 730                 735
Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu
            740                 745                 750
Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr
        755                 760                 765
Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly
    770                 775                 780
Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro
785                 790                 795                 800
Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu
                805                 810                 815
Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser
            820                 825                 830
Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro
        835                 840                 845
Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu
    850                 855                 860
Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro
865                 870                 875                 880
Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885                 890
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<210> 338

<211> 888
<212> PRT
<213> Unknown

<220>
<223> VP 113

<400> 338

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1                5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
```

Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
100 105 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
115 120 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
130 135 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145 150 155 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
165 170 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
180 185 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
195 200 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
210 215 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225 230 235 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
245 250 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln Gly Pro Gln Ile Gly Gln
260 265 270
Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu Pro
275 280 285
Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr Gly
290 295 300
Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val Met
305 310 315 320
Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala
325 330 335
Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser
340 345 350
Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys
355 360 365
Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln
370 375 380
Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala
385 390 395 400
Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile
405 410 415
Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val
420 425 430
Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn
435 440 445
Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr
450 455 460
Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu
465 470 475 480
Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp
485 490 495
Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val
500 505 510
Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln
515 520 525
Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr
530 535 540
Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser
545 550 555 560
Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val
565 570 575
Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val
580 585 590
Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val
595 600 605
Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg

610 615 620
Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu
625 630 635 640
Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu
645 650 655
Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys
660 665 670
Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr
675 680 685
Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr
690 695 700
Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu
705 710 715 720
Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val
725 730 735
Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu
740 745 750
Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly
755 760 765
Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr
770 775 780
Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu
785 790 795 800
Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly
805 810 815
Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro
820 825 830
Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu
835 840 845
Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn
850 855 860
Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys
865 870 875 880
Lys Asn Leu Ser Asp Phe Ile Ala
885

<210> 339

<211> 900
<212> PRT
<213> Unknown

<220>
<223> VP 114

<400> 339
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp

145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
275 280 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
290 295 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305 310 315 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
325 330 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
340 345 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
355 360 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
370 375 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385 390 395 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His
405 410 415
Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His
420 425 430
Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu
435 440 445
Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu
450 455 460
Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly
465 470 475 480
Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu
485 490 495
Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu
500 505 510
Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala
515 520 525
Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr
530 535 540
Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe
545 550 555 560
Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe
565 570 575
Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe
580 585 590
Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe
595 600 605
His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys
610 615 620
Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn
625 630 635 640
Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser
645 650 655
Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp
660 665 670

```
Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn
        675                 680                 685
Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val
    690                 695                 700
Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr
705                 710                 715                 720
Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys
                725                 730                 735
Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met
            740                 745                 750
Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys
        755                 760                 765
Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn
    770                 775                 780
Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln
785                 790                 795                 800
Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu
                805                 810                 815
Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro
            820                 825                 830
Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu
        835                 840                 845
Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala
    850                 855                 860
Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr
865                 870                 875                 880
Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser
                885                 890                 895
Asp Phe Ile Ala
            900
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<210> 340

<211> 894
<212> PRT
<213> Unknown

<220>
<223> VP 115

<400> 340

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
```

Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
275 280 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
290 295 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305 310 315 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
325 330 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
340 345 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
355 360 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
370 375 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385 390 395 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu
405 410 415
His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe
420 425 430
Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr
435 440 445
Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe
450 455 460
Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe
465 470 475 480
Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val
485 490 495
Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys
500 505 510
Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln
515 520 525
Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp
530 535 540
Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu
545 550 555 560
Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly
565 570 575
Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr
580 585 590
Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu
595 600 605
Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu
610 615 620
Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe
625 630 635 640
Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val
645 650 655
Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro
660 665 670
Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys
675 680 685
Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser
690 695 700
Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr

705 710 715 720
Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly
725 730 735
Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu
740 745 750
Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr
755 760 765
Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly
770 775 780
Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro
785 790 795 800
Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu
805 810 815
Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser
820 825 830
Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro
835 840 845
Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu
850 855 860
Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro
865 870 875 880
Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
885 890

<210> 341

<211> 900
<212> PRT
<213> Unknown

<220>
<223> VP 116

<400> 341
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
100 105 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val

```
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
        275                 280                 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
    290                 295                 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305                 310                 315                 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
                325                 330                 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
            340                 345                 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
        355                 360                 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
    370                 375                 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385                 390                 395                 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His
                405                 410                 415
Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His
            420                 425                 430
Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu
        435                 440                 445
Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu
    450                 455                 460
Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly
465                 470                 475                 480
Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu
                485                 490                 495
Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu
            500                 505                 510
Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala
        515                 520                 525
Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr
    530                 535                 540
Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe
545                 550                 555                 560
Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe
                565                 570                 575
Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe
            580                 585                 590
Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe
        595                 600                 605
His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys
    610                 615                 620
Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn
625                 630                 635                 640
Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser
                645                 650                 655
Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp
            660                 665                 670
Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn
        675                 680                 685
Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val
    690                 695                 700
Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr
705                 710                 715                 720
Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys
                725                 730                 735
Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met
            740                 745                 750
Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys
        755                 760                 765
```

```
Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn
    770                 775                 780
Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln
785                 790                 795                 800
Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu
                805                 810                 815
Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro
            820                 825                 830
Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu
        835                 840                 845
Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala
    850                 855                 860
Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr
865                 870                 875                 880
Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser
                885                 890                 895
Asp Phe Ile Ala
            900
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<210> 342

<211> 894
<212> PRT
<213> Unknown

<220>
<223> VP 117 <400> 342

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp His
            100                 105                 110
Tyr Ser Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
        275                 280                 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
    290                 295                 300
```

```
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305                 310                 315                 320
Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu
                325                 330                 335
Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser
            340                 345                 350
His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly
        355                 360                 365
Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile
    370                 375                 380
Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val
385                 390                 395                 400
Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu
                405                 410                 415
His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe
            420                 425                 430
Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr
        435                 440                 445
Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe
    450                 455                 460
Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe
465                 470                 475                 480
Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val
                485                 490                 495
Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys
            500                 505                 510
Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln
        515                 520                 525
Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp
    530                 535                 540
Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu
545                 550                 555                 560
Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly
                565                 570                 575
Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr
            580                 585                 590
Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu
        595                 600                 605
Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu
    610                 615                 620
Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe
625                 630                 635                 640
Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val
                645                 650                 655
Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro
            660                 665                 670
Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys
        675                 680                 685
Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser
    690                 695                 700
Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr
705                 710                 715                 720
Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly
                725                 730                 735
Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu
            740                 745                 750
Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr
        755                 760                 765
Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly
    770                 775                 780
Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro
785                 790                 795                 800
Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu
                805                 810                 815
Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser
```

```
            820                 825                 830
Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro
        835                 840                 845
Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu
    850                 855                 860
Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro
865                 870                 875                 880
Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885                 890
```

<210> 343

<211> 901
<212> PRT
<213> Unknown

<220>
<223> VP 119

<400> 343 Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala

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 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Ser Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala
        275                 280                 285
Thr Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys
    290                 295                 300
His Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu
305                 310                 315                 320
Asp Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr
                325                 330                 335
Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr
            340                 345                 350
Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro
```

```
          355                 360                 365
Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys
    370                 375                 380
Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val
385                 390                 395                 400
Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His
                405                 410                 415
His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser
            420                 425                 430
His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys
        435                 440                 445
Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn
    450                 455                 460
Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn
465                 470                 475                 480
Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys
                485                 490                 495
Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val
            500                 505                 510
Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile
        515                 520                 525
Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys
    530                 535                 540
Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr
545                 550                 555                 560
Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile
                565                 570                 575
Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln
            580                 585                 590
Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu
        595                 600                 605
Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile
    610                 615                 620
Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly
625                 630                 635                 640
Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln
                645                 650                 655
Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr
            660                 665                 670
Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu
        675                 680                 685
Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys
    690                 695                 700
Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser
705                 710                 715                 720
Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala
                725                 730                 735
Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn
            740                 745                 750
Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys
        755                 760                 765
Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu
    770                 775                 780
Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn
785                 790                 795                 800
Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn
                805                 810                 815
Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn
            820                 825                 830
Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu
        835                 840                 845
Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr
    850                 855                 860
Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly
865                 870                 875                 880
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Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu
885 890 895
Ser Asp Phe Ile Ala
900

<210> 344

<211> 895
<212> PRT
<213> Unknown

<220>
<223> VP 120

<400> 344
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His
100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270
Ser Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala
275 280 285
Thr Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys
290 295 300
His Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu
305 310 315 320
Asp Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr
325 330 335
Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr
340 345 350
Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro
355 360 365
Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys
370 375 380
Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val
385 390 395 400

Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp
405 410 415
Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu
420 425 430
Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr
435 440 445
Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr
450 455 460
Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser
465 470 475 480
Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu
485 490 495
Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly
500 505 510
Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp
515 520 525
Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys
530 535 540
Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser
545 550 555 560
Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala
565 570 575
Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly
580 585 590
Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr
595 600 605
Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys
610 615 620
Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr
625 630 635 640
Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu
645 650 655
Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu
660 665 670
Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu
675 680 685
Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu
690 695 700
Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro
705 710 715 720
Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr
725 730 735
Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu
740 745 750
Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe
755 760 765
Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn
770 775 780
Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys
785 790 795 800
Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro
805 810 815
Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly
820 825 830
Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp
835 840 845
Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly
850 855 860
Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu
865 870 875 880
Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
885 890 895

<210> 345

<211> 901
<212> PRT
<213> Unknown

<220>
<223> VP 121

<400> 345
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
100 105 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
115 120 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
130 135 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145 150 155 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
165 170 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
180 185 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
195 200 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
210 215 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225 230 235 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
245 250 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
260 265 270
Ser Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala
275 280 285
Thr Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys
290 295 300
His Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu
305 310 315 320
Asp Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr
325 330 335
Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr
340 345 350
Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro
355 360 365
Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys
370 375 380
Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val
385 390 395 400
Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His
405 410 415
His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser
420 425 430
His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys
435 440 445
Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn

```
    450                 455                 460
Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn
465                 470                 475                 480
Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys
                485                 490                 495
Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val
            500                 505                 510
Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile
        515                 520                 525
Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys
    530                 535                 540
Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr
545                 550                 555                 560
Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile
                565                 570                 575
Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln
            580                 585                 590
Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu
        595                 600                 605
Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile
    610                 615                 620
Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly
625                 630                 635                 640
Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln
                645                 650                 655
Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr
            660                 665                 670
Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu
        675                 680                 685
Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys
    690                 695                 700
Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser
705                 710                 715                 720
Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala
                725                 730                 735
Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn
            740                 745                 750
Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys
        755                 760                 765
Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu
    770                 775                 780
Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn
785                 790                 795                 800
Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn
                805                 810                 815
Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn
            820                 825                 830
Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu
        835                 840                 845
Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr
    850                 855                 860
Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly
865                 870                 875                 880
Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu
                885                 890                 895
Ser Asp Phe Ile Ala
            900
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<210> 346

<211> 895
<212> PRT
<213> Unknown

<220>

<223> VP 122

<400> 346

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Ser Tyr Asp Ser
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Ser Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala
        275                 280                 285
Thr Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys
    290                 295                 300
His Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu
305                 310                 315                 320
Asp Glu Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr
                325                 330                 335
Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr
            340                 345                 350
Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro
        355                 360                 365
Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys
    370                 375                 380
Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val
385                 390                 395                 400
Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp
                405                 410                 415
Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu
            420                 425                 430
Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr
        435                 440                 445
Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr
    450                 455                 460
Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser
465                 470                 475                 480
Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu
                485                 490                 495
```

```
Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly
            500                 505                 510
Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp
        515                 520                 525
Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys
    530                 535                 540
Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser
545                 550                 555                 560
Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala
                565                 570                 575
Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly
            580                 585                 590
Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr
        595                 600                 605
Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys
    610                 615                 620
Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr
625                 630                 635                 640
Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu
                645                 650                 655
Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu
            660                 665                 670
Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu
        675                 680                 685
Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu
    690                 695                 700
Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro
705                 710                 715                 720
Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr
                725                 730                 735
Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu
            740                 745                 750
Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe
        755                 760                 765
Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn
    770                 775                 780
Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys
785                 790                 795                 800
Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro
                805                 810                 815
Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly
            820                 825                 830
Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp
        835                 840                 845
Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly
    850                 855                 860
Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu
865                 870                 875                 880
Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885                 890                 895
```

<210> 347

<211> 895
<212> PRT
<213> Unknown

<220>
<223> VP 123

<400> 347

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
```

Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
85 90 95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
100 105 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
115 120 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
130 135 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145 150 155 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
165 170 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
180 185 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
195 200 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
210 215 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225 230 235 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
245 250 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln Ser Gly Pro Gln Ile Gly
260 265 270
Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu
275 280 285
Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr
290 295 300
Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val
305 310 315 320
Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala
325 330 335
Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp
340 345 350
Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met
355 360 365
Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys
370 375 380
Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn
385 390 395 400
Ala Ile Ile Tyr Pro His Gly Asp His His His Ala Asp Pro Ile Asp
405 410 415
Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu
420 425 430
Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr
435 440 445
Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr
450 455 460
Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser
465 470 475 480
Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu
485 490 495
Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly
500 505 510
Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp
515 520 525
Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys
530 535 540
Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser

```
545                 550                 555                 560
Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala
                565                 570                 575
Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly
            580                 585                 590
Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr
        595                 600                 605
Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys
    610                 615                 620
Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr
625                 630                 635                 640
Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu
                645                 650                 655
Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu
            660                 665                 670
Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu
        675                 680                 685
Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu
    690                 695                 700
Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro
705                 710                 715                 720
Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr
                725                 730                 735
Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu
            740                 745                 750
Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe
        755                 760                 765
Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn
    770                 775                 780
Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys
785                 790                 795                 800
Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro
                805                 810                 815
Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly
            820                 825                 830
Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp
        835                 840                 845
Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly
    850                 855                 860
Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu
865                 870                 875                 880
Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885                 890                 895
```

<210> 348

<211> 889
<212> PRT
<213> Unknown

<220>
<223> VP 124

<400> 348

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
```

```
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Asn Ile Lys Phe
            100                 105                 110
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
        115                 120                 125
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
    130                 135                 140
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
145                 150                 155                 160
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
                165                 170                 175
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
            180                 185                 190
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
        195                 200                 205
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
    210                 215                 220
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
225                 230                 235                 240
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
                245                 250                 255
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln Ser Gly Pro Gln Ile Gly
            260                 265                 270
Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu
        275                 280                 285
Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr
    290                 295                 300
Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val
305                 310                 315                 320
Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala
                325                 330                 335
Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp
            340                 345                 350
Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met
        355                 360                 365
Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys
    370                 375                 380
Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn
385                 390                 395                 400
Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
                405                 410                 415
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
            420                 425                 430
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
        435                 440                 445
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
    450                 455                 460
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
465                 470                 475                 480
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
                485                 490                 495
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
            500                 505                 510
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
        515                 520                 525
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
    530                 535                 540
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
545                 550                 555                 560
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
                565                 570                 575
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
            580                 585                 590
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
        595                 600                 605
```

```
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
    610                 615                 620
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
625                 630                 635                 640
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
                645                 650                 655
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
            660                 665                 670
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
        675                 680                 685
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
    690                 695                 700
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
705                 710                 715                 720
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
                725                 730                 735
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
            740                 745                 750
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
        755                 760                 765
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
    770                 775                 780
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
785                 790                 795                 800
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
                805                 810                 815
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
            820                 825                 830
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
        835                 840                 845
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
    850                 855                 860
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
865                 870                 875                 880
Lys Lys Asn Leu Ser Asp Phe Ile Ala
                885
```

<210> 349

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 42

<400> 349

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Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1                5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser Ser Gly Asp Ser Asn Ser Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
```

```
Gly Asp Gly Thr Ser Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
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<210> 350

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 49

<400> 350
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
 20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
 35 40 45
Ser Gly Phe Val Met Ser Ser Gly Asp His Asn His Tyr Phe Phe Lys
 50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
 85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
 100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
 115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
 130 135 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
 165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
 180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
 195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
 210 215 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
 245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
 260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
 275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
 290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
 325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
 340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
 355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
 370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
 405 410 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
 420 425 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
 435 440 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln

```
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 351

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 50

<400> 351

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1                   5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser Ser Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
```

245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
405 410 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
420 425 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
435 440 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
450 455 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465 470 475 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
485 490 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
500 505 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
515 520 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
530 535 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545 550 555 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
565 570 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
580 585 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
595 600 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
610 615 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625 630

<210> 352

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 51

<400> 352
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu

```
         35                  40                  45
Ser Gly Phe Val Met Ser Ser Gly Asp His Asn His Tyr Phe Phe Lys
     50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
```

```
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 353

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 52

<400> 353

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser Ser Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
```

```
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 354

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 53

<400> 354

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp His Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
```

```
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 355

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 54

<400> 355
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
 20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
 35 40 45
Ser Gly Phe Val Met Ser His Gly Asp His Asn His Tyr Phe Phe Lys
 50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
 85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
 100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
 115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
 130 135 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
 165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
 180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
 195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
 210 215 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
 245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
 260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
 275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
 290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
 325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
 340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
 355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
 370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
 405 410 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
 420 425 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
 435 440 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln

```
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 356

<211> 569
<212> PRT
<213> Unknown

<220>
<223> NEW 55

<400> 356

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Met Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
 1                5                  10                  15
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
            20                  25                  30
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
        35                  40                  45
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
    50                  55                  60
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
65                  70                  75                  80
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
                85                  90                  95
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
            100                 105                 110
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
        115                 120                 125
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
    130                 135                 140
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
145                 150                 155                 160
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
                165                 170                 175
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
            180                 185                 190
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
        195                 200                 205
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
    210                 215                 220
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
225                 230                 235                 240
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
```

```
                245                 250                 255
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
            260                 265                 270
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
        275                 280                 285
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
    290                 295                 300
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
305                 310                 315                 320
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
                325                 330                 335
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
            340                 345                 350
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
        355                 360                 365
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
    370                 375                 380
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
385                 390                 395                 400
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
                405                 410                 415
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
            420                 425                 430
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
        435                 440                 445
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
    450                 455                 460
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
465                 470                 475                 480
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
                485                 490                 495
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
            500                 505                 510
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
        515                 520                 525
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
    530                 535                 540
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
545                 550                 555                 560
Lys Lys Asn Leu Ser Asp Phe Ile Ala
                565
```

<210> 357

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 56

<400> 357

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1                5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
```

```
                100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
```

Lys Lys Asn Leu Ser Asp Phe Ile Ala
625 630

<210> 358

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 56

<400> 358
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
130 135 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
210 215 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
405 410 415

```
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 359

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 56

<400> 359

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
```

```
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 360

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 57

<400> 360

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp His Asn Ser Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
```

```
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630

<210> 361

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 63

<400> 361
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1                  5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
```

```
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 362

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 64

<400> 362

```
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1                5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp His Asn Ser Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
```

```
                100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
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Lys Lys Asn Leu Ser Asp Phe Ile Ala
625 630

<210> 363

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 65

<400> 363
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
130 135 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
210 215 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
405 410 415

```
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
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<210> 364

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 66

<400> 364

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Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp His Asn Ser Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
    130                 135                 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
```

```
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
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<210> 365

<211> 633
<212> PRT
<213> Unknown

<220>
<223> NEW 76

<400> 365

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Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp His Asn Ser Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225                 230                 235                 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
                245                 250                 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
            260                 265                 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
        275                 280                 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
    290                 295                 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305                 310                 315                 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
                325                 330                 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
            340                 345                 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
        355                 360                 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
    370                 375                 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
```

```
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala
625                 630
```

<210> 366

<211> 627
<212> PRT
<213> Unknown

<220>
<223> NEW 105

<400> 366

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Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu
    50                  55                  60
Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His
65                  70                  75                  80
Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn
                85                  90                  95
Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala
            100                 105                 110
Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn
        115                 120                 125
Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala
    130                 135                 140
Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser
145                 150                 155                 160
Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly
                165                 170                 175
Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu
            180                 185                 190
Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln
        195                 200                 205
Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly
    210                 215                 220
Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu
225                 230                 235                 240
Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn
                245                 250                 255
Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr
            260                 265                 270
Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr
        275                 280                 285
Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr
    290                 295                 300
Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala
```

305 310 315 320
Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His
325 330 335
Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu
340 345 350
Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys
355 360 365
Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr
370 375 380
Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys
385 390 395 400
Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser
405 410 415
Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu
420 425 430
Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu
435 440 445
Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe
450 455 460
Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp
465 470 475 480
Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn
485 490 495
Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys
500 505 510
Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro
515 520 525
Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys
530 535 540
Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu
545 550 555 560
Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala
565 570 575
Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser
580 585 590
Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile
595 600 605
Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp
610 615 620
Phe Ile Ala
625

<210> 367

<211> 627
<212> PRT
<213> Unknown

<220>
<223> NEW 106

<400> 367
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser His Gly Asp His Asn His Tyr Phe Phe Lys
50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys

```
                100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala
    130                 135                 140
Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser
145                 150                 155                 160
Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly
                165                 170                 175
Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu
            180                 185                 190
Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln
        195                 200                 205
Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly
    210                 215                 220
Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu
225                 230                 235                 240
Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn
                245                 250                 255
Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr
            260                 265                 270
Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr
        275                 280                 285
Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr
    290                 295                 300
Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala
305                 310                 315                 320
Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His
                325                 330                 335
Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu
            340                 345                 350
Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys
        355                 360                 365
Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr
    370                 375                 380
Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys
385                 390                 395                 400
Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser
                405                 410                 415
Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu
            420                 425                 430
Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu
        435                 440                 445
Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe
    450                 455                 460
Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp
465                 470                 475                 480
Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn
                485                 490                 495
Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys
            500                 505                 510
Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro
        515                 520                 525
Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys
    530                 535                 540
Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu
545                 550                 555                 560
Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala
                565                 570                 575
Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser
            580                 585                 590
Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile
        595                 600                 605
Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp
    610                 615                 620
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Phe Ile Ala
625

<210> 368
<211> 621
<212> PRT
<213> Unknown

<220>
<223> NEW 107

<400> 368
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu
50 55 60
Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His
65 70 75 80
Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn
85 90 95
Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala
100 105 110
Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn
115 120 125
Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ala Asp Pro Ile Asp Glu His
130 135 140
Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys
145 150 155 160
Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly
165 170 175
Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn
180 185 190
Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser
195 200 205
Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys
210 215 220
Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val
225 230 235 240
Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro
245 250 255
Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr
260 265 270
Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala
275 280 285
Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp
290 295 300
Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp
305 310 315 320
Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu
325 330 335
Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn
340 345 350
Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met
355 360 365
Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro
370 375 380
Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln
385 390 395 400
Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val
405 410 415
Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu

```
            420                 425                 430
Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val
        435                 440                 445
Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met
    450                 455                 460
Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr
465                 470                 475                 480
Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly
                485                 490                 495
Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys
            500                 505                 510
Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala
        515                 520                 525
Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn
    530                 535                 540
Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp
545                 550                 555                 560
Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val
                565                 570                 575
Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp
            580                 585                 590
Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser
        595                 600                 605
Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
    610                 615                 620
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<210> 369

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 89

<400> 369

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Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
 1               5                  10                  15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
            20                  25                  30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
        35                  40                  45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
    50                  55                  60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65                  70                  75                  80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
                85                  90                  95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
            100                 105                 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
        115                 120                 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
    130                 135                 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145                 150                 155                 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
                165                 170                 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
            180                 185                 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
        195                 200                 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
    210                 215                 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
```

225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
405 410 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
420 425 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
435 440 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
450 455 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465 470 475 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
485 490 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
500 505 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
515 520 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
530 535 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545 550 555 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
565 570 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
580 585 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
595 600 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
610 615 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala Gly Pro Gln Ile Thr Tyr Thr
625 630 635 640
Asp Asp Glu Ile Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu
645 650 655
Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile Lys Lys Asp Ser Leu Ser
660 665 670
Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu
675 680 685
Thr Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys
690 695 700
Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro
705 710 715 720
Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn
725 730 735
Gly Ser Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe
740 745 750

```
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
        755                 760                 765
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
    770                 775                 780
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
785                 790                 795                 800
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
                805                 810                 815
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
            820                 825                 830
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
        835                 840                 845
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
    850                 855                 860
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
865                 870                 875                 880
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
                885                 890                 895
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            900                 905
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<210> 370

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 90

<400> 370

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1                5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
```

```
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
        275                 280                 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
    290                 295                 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305                 310                 315                 320
Glu Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe
                325                 330                 335
Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu
            340                 345                 350
Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His
        355                 360                 365
Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys
    370                 375                 380
Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys
385                 390                 395                 400
Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro
                405                 410                 415
Ser Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val
            420                 425                 430
Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu
        435                 440                 445
Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu
    450                 455                 460
Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn
465                 470                 475                 480
Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro
                485                 490                 495
Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr
            500                 505                 510
Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu
        515                 520                 525
Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro
    530                 535                 540
Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val
545                 550                 555                 560
Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met
                565                 570                 575
Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu
            580                 585                 590
Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val
        595                 600                 605
Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr
    610                 615                 620
Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr
625                 630                 635                 640
Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala
                645                 650                 655
Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu
            660                 665                 670
Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg
        675                 680                 685
Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro
    690                 695                 700
Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn
705                 710                 715                 720
Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val
                725                 730                 735
Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu
            740                 745                 750
Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser
        755                 760                 765
Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro
    770                 775                 780
Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr
```

785 790 795 800
Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu
805 810 815
Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp
820 825 830
Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu
835 840 845
Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys
850 855 860
Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile
865 870 875 880
Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val
885 890 895
Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
900 905

<210> 371

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 91

<400> 371
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser Ser Gly Asp Ser Asn His Tyr Phe Phe Lys
50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
130 135 140
Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
210 215 220 Leu Glu
Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg

305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
385 390 395 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
405 410 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
420 425 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
435 440 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
450 455 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465 470 475 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
485 490 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
500 505 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
515 520 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
530 535 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545 550 555 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
565 570 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
580 585 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
595 600 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
610 615 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala Gly Pro Gln Ile Thr Tyr Thr
625 630 635 640
Asp Asp Glu Ile Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu
645 650 655
Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile Lys Lys Asp Ser Leu Ser
660 665 670
Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu
675 680 685
Thr Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys
690 695 700
Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro
705 710 715 720
Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn
725 730 735
Gly Ser Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe
740 745 750
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
755 760 765
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
770 775 780
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
785 790 795 800
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
805 810 815
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
820 825 830

```
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
        835                 840                 845
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
    850                 855                 860
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
865                 870                 875                 880  Lys Asp
Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
                885                 890                 895
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            900                 905
```

<210> 372

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 92

<400> 372

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Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
 1               5                  10                  15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
            20                  25                  30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
        35                  40                  45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
    50                  55                  60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65                  70                  75                  80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr Asp His
            100                 105                 110
Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala
        115                 120                 125
Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr
    130                 135                 140
Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp
145                 150                 155                 160
Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu
                165                 170                 175
Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn
            180                 185                 190
Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr
        195                 200                 205
Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr
    210                 215                 220
Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser
225                 230                 235                 240
Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val
                245                 250                 255
Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265                 270
Gly Pro Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr
        275                 280                 285
Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His
    290                 295                 300
Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp
305                 310                 315                 320
Glu Ser Gly Phe Val Met Ser Ser Gly Asp Ser Asn His Tyr Phe Phe
                325                 330                 335
Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu
            340                 345                 350
```

Glu Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His
355 360 365
Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys
370 375 380
Lys Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys
385 390 395 400
Arg Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro
405 410 415
Ser Gly Asp Gly His His Ala Asp Pro Ile Asp Glu His Lys Pro Val
420 425 430
Gly Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu
435 440 445
Gly Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu
450 455 460
Thr Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn
465 470 475 480
Phe Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro
485 490 495
Glu Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr
500 505 510
Pro Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu
515 520 525
Gly Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro
530 535 540
Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val
545 550 555 560
Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met
565 570 575
Ala Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu
580 585 590
Arg Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val
595 600 605
Arg Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr
610 615 620
Lys Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr
625 630 635 640
Thr Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala
645 650 655
Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu
660 665 670
Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg
675 680 685
Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro
690 695 700
Lys Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn
705 710 715 720
Ser Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val
725 730 735
Gln Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu
740 745 750
Asn Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser
755 760 765
Gly Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro
770 775 780
Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr
785 790 795 800
Gly Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu
805 810 815
Pro Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp
820 825 830
Asn Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu
835 840 845
Asp Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys
850 855 860
Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile

865 870 875 880
Phe Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val
885 890 895
Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
900 905

<210> 373

<211> 906
<212> PRT
<213> Unknown

<220>
<223> VP 93

<400> 373
Met Gln Ile Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro
1 5 10 15
Ser Pro Ser Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu
20 25 30
Glu Asp Gly Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu
35 40 45
Ser Gly Phe Val Met Ser His Gly Asp Ser Asn His Tyr Phe Phe Lys
50 55 60
Lys Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
65 70 75 80
Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
85 90 95
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
100 105 110
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
115 120 125
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro Ser
130 135 140
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
145 150 155 160
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
165 170 175
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
180 185 190
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
195 200 205
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
210 215 220
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
225 230 235 240
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
245 250 255
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
260 265 270
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
275 280 285
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
290 295 300
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
305 310 315 320
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
325 330 335
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
340 345 350
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
355 360 365
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
370 375 380
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys

```
385                 390                 395                 400
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
                405                 410                 415
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
            420                 425                 430
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
        435                 440                 445
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
    450                 455                 460
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
465                 470                 475                 480
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
                485                 490                 495
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
            500                 505                 510
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
        515                 520                 525
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
    530                 535                 540
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
545                 550                 555                 560
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
                565                 570                 575
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
            580                 585                 590
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe
        595                 600                 605
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
    610                 615                 620
Lys Lys Asn Leu Ser Asp Phe Ile Ala Gly Pro Gln Ile Thr Tyr Thr
625                 630                 635                 640
Asp Asp Glu Ile Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu
                645                 650                 655
Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile Lys Lys Asp Ser Leu Ser
            660                 665                 670
Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu
        675                 680                 685
Thr Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys
    690                 695                 700
Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro
705                 710                 715                 720
Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn
                725                 730                 735
Gly Ser Leu Ile Ile Pro Ser Tyr Asp His Tyr His Asn Ile Lys Phe
            740                 745                 750
Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu
        755                 760                 765
Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg Asn Ala
    770                 775                 780
Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp
785                 790                 795                 800
Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro Glu Ser
                805                 810                 815
Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu
            820                 825                 830
Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp
        835                 840                 845
Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg Gln Asn
    850                 855                 860
Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr
865                 870                 875                 880
Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu
                885                 890                 895
Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            900                 905
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<210> 374
<211> 259
<212> PRT
<213> Unknown

<220>
<223> VP43S

<400> 374
Met Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr
1 5 10 15
Ser Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala
20 25 30
Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His
35 40 45
Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn
50 55 60
Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn
65 70 75 80
Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His
85 90 95
Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu
100 105 110
Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu Asp Leu Leu Ala Thr Val
115 120 125
Lys Tyr Tyr Val Glu Pro Arg Asn Ala Ser Asp His Val Arg Lys Asn
130 135 140
Lys Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu
145 150 155 160
Val Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala
165 170 175
Gly Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr
180 185 190
Glu Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile
195 200 205
Pro Gly Thr Pro Ser Ile Arg Gln Asn Ala Met Glu Thr Leu Thr Gly
210 215 220
Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys Asp Asn Asn Thr Ile Ser
225 230 235 240
Ala Glu Val Asp Ser Leu Leu Ala Leu Leu Lys Glu Ser Gln Pro Ala
245 250 255
Pro Ile Gln

<210> 375
<211> 268
<212> PRT
<213> Unknown

<220>
<223> NEW 86

<400> 375
Met Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala
1 5 10 15
Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Thr Ser Trp Ile
20 25 30
Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln Ala Tyr
35 40 45
Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln Asp Ser
50 55 60
Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg Val Lys
65 70 75 80
Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu Gln Tyr

```
                85                  90                  95
Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro Pro Gly Asn Ile
            100                 105                 110
Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr
        115                 120                 125
Ser Leu Glu Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu Pro Arg
    130                 135                 140
Asn Ala Ser Asp His Val Arg Lys Asn Lys Ala Asp Gln Asp Ser Lys
145                 150                 155                 160
Pro Asp Glu Asp Lys Glu His Asp Glu Val Ser Glu Pro Thr His Pro
                165                 170                 175
Glu Ser Asp Glu Lys Glu Asn His Ala Gly Leu Asn Pro Ser Ala Asp
            180                 185                 190
Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu Glu Thr Glu Glu Glu Ala
        195                 200                 205
Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro Gly Thr Pro Ser Ile Arg
    210                 215                 220
Gln Asn Ala Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu
225                 230                 235                 240
Gly Thr Lys Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu
                245                 250                 255
Ala Leu Leu Lys Glu Ser Gln Pro Ala Pro Ile Gln
            260                 265
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<210> 376
<211> 999
<212> PRT
<213> Unknown

<220>
<223> NEW 17

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (430)...(430)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (431)...(431)
<223> Xaa = Proline or nothing

<400> 376

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Xaa Asp Ile Asp Ser Leu Leu Lys Gln Leu Tyr Lys Leu Pro Leu Ser
 1                   5                  10                  15
Gln Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln Ile
            20                  25                  30
Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His Tyr
        35                  40                  45
His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile Ala
    50                  55                  60
Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp Ser
65                  70                  75                  80
Arg Pro Glu Glu Pro Ser Pro Gln Pro Thr Pro Glu Pro Ser Pro Ser
                85                  90                  95
Pro Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile Asp
            100                 105                 110
Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr Val
        115                 120                 125
Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asn Leu Ser
    130                 135                 140
Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu Ser
145                 150                 155                 160
```

Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser Asp
165 170 175
Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His Gln
180 185 190
Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Ala Leu Asp
195 200 205
Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys Leu
210 215 220
Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg
225 230 235 240
Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln
245 250 255
Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe
260 265 270
Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro
275 280 285
His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala
290 295 300
Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro
305 310 315 320
Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala
325 330 335
Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp
340 345 350
Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser
355 360 365
Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp
370 375 380
Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Thr Leu Glu Asp
385 390 395 400
Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro
405 410 415
His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Xaa Xaa Asp
420 425 430
Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val
435 440 445
Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp
450 455 460
Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu
465 470 475 480
Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser
485 490 495
Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp
500 505 510
His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly
515 520 525
His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala
530 535 540
Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val
545 550 555 560
Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu
565 570 575
Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu
580 585 590
Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly
595 600 605
Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly
610 615 620
Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr
625 630 635 640
Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp
645 650 655
Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln
660 665 670
Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn

```
        675                 680                 685
Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe
    690                 695                 700
Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly
705                 710                 715                 720
Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr
                725                 730                 735
Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp
            740                 745                 750
Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn
        755                 760                 765
Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala
    770                 775                 780
Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser
785                 790                 795                 800
Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser
                805                 810                 815
Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys
            820                 825                 830
Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu
        835                 840                 845
Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val
    850                 855                 860
Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn
865                 870                 875                 880
Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val
                885                 890                 895
Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala
            900                 905                 910
Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met
        915                 920                 925
Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala
    930                 935                 940
Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys
945                 950                 955                 960
Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met
                965                 970                 975
Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys
            980                 985                 990
Asn Leu Ser Asp Phe Ile Ala
        995

<210> 377
 <211> 999
<212> PRT
<213> Unknown

<220>
<223> NEW 20

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (570)...(570)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (571)...(571)
<223> Xaa = Proline or nothing

<400> 377
Xaa Asp Leu Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu
 1               5                  10                  15
```

Glu Val Lys Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu
20 25 30
Gln Asp Tyr Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys
35 40 45
Ile Glu Glu Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg
50 55 60
Glu Ser Ile Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His
65 70 75 80
Gly Asp His His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly
85 90 95
Ile Gly His Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly
100 105 110
Val Ala Lys Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr
115 120 125
Asn Val Val Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe
130 135 140
Thr Leu Ala Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu
145 150 155 160
Leu Glu Lys Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro
165 170 175
Asp Gly Lys Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly
180 185 190
Val Gly Asn Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly
195 200 205
Gln Thr Phe Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser
210 215 220
Tyr Asp Gly Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala
225 230 235 240
Ser Gln Thr Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg
245 250 255
Val Asn Pro Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg
260 265 270
Val Phe Asp Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys
275 280 285
Val Gly Glu Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr
290 295 300
Arg Thr Ala Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr
305 310 315 320
Leu Asp Asn Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys
325 330 335
Glu Asn Gln Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn
340 345 350
Lys Ala Gln Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys
355 360 365
Thr Ser Glu Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser
370 375 380
Thr Ser Asn Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln
385 390 395 400
Glu Lys Val Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn
405 410 415
Val Leu Phe Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly
420 425 430
Glu Val Ile Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln
435 440 445
Gly Asn Gly Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly
450 455 460
Thr Val Glu Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro
465 470 475 480
Glu Ala Pro Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn
485 490 495
Gly Met Leu Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp
500 505 510
Pro Ala Leu Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu
515 520 525
Glu Lys Phe Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe

```
    530                 535                 540
Asn Met Asp Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile
545                 550                 555                 560
Lys Lys Asn Leu Ser Asp Phe Ile Ala Xaa Xaa Asp Ile Asp Ser Leu
                565                 570                 575
Leu Lys Gln Leu Tyr Lys Leu Pro Leu Ser Gln Arg His Val Glu Ser
            580                 585                 590
Asp Gly Leu Ile Phe Asp Pro Ala Gln Ile Thr Ser Arg Thr Ala Arg
        595                 600                 605
Gly Val Ala Val Pro His Gly Asn His Tyr His Phe Ile Pro Tyr Glu
    610                 615                 620
Gln Met Ser Glu Leu Glu Lys Arg Ile Ala Arg Ile Ile Pro Leu Arg
625                 630                 635                 640
Tyr Arg Ser Asn His Trp Val Pro Asp Ser Arg Pro Glu Glu Pro Ser
                645                 650                 655
Pro Gln Pro Thr Pro Glu Pro Ser Pro Ser Pro Gln Pro Ala Pro Asn
            660                 665                 670
Pro Gln Pro Ala Pro Ser Asn Pro Ile Asp Glu Lys Leu Val Lys Glu
        675                 680                 685
Ala Val Arg Lys Val Gly Asp Gly Tyr Val Phe Glu Glu Asn Gly Val
    690                 695                 700
Ser Arg Tyr Ile Pro Ala Lys Asn Leu Ser Ala Glu Thr Ala Ala Gly
705                 710                 715                 720
Ile Asp Ser Lys Leu Ala Lys Gln Glu Ser Leu Ser His Lys Leu Gly
                725                 730                 735
Ala Lys Lys Thr Asp Leu Pro Ser Ser Asp Arg Glu Phe Tyr Asn Lys
            740                 745                 750
Ala Tyr Asp Leu Leu Ala Arg Ile His Gln Asp Leu Leu Asp Asn Lys
        755                 760                 765
Gly Arg Gln Val Asp Phe Glu Ala Leu Asp Asn Leu Leu Glu Arg Leu
    770                 775                 780
Lys Asp Val Ser Ser Asp Lys Val Lys Leu Val Asp Asp Ile Leu Ala
785                 790                 795                 800
Phe Leu Ala Pro Ile Arg His Pro Glu Arg Leu Gly Lys Pro Asn Ala
                805                 810                 815
Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val Ala Lys Leu Ala Gly
            820                 825                 830
Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp Pro Arg Asp Ile Thr
        835                 840                 845
Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro His Met Thr His Ser His
    850                 855                 860
Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala Glu Arg Ala Ala Ala Gln
865                 870                 875                 880
Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro Pro Ser Thr Asp His Gln
                885                 890                 895
Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala Glu Ala Ile Tyr Asn Arg
            900                 905                 910
Val Lys Ala Ala Lys Lys Val Pro Leu Asp Arg Met Pro Tyr Asn Leu
        915                 920                 925
Gln Tyr Thr Val Glu Val Lys Asn Gly Ser Leu Ile Ile Pro His Tyr
    930                 935                 940
Asp His Tyr His Asn Ile Lys Phe Glu Trp Phe Asp Glu Gly Leu Tyr
945                 950                 955                 960
Glu Ala Pro Lys Gly Tyr Thr Leu Glu Asp Leu Leu Ala Thr Val Lys
                965                 970                 975
Tyr Tyr Val Glu His Pro Asn Glu Arg Pro His Ser Asp Asn Gly Phe
            980                 985                 990
Gly Asn Ala Ser Asp His Val
        995
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<210> 378
<211> 1378
<212> PRT
<213> Unknown

<220>
<223> NEW 26

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (570)...(570)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (571)...(571)
<223> Xaa = Proline or nothing

<400> 378
Xaa Glu Asn Ile Ser Ser Leu Leu Arg Glu Leu Tyr Ala Lys Pro Leu
 1 5 10 15
Ser Glu Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln
 20 25 30
Ile Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His
 35 40 45
Tyr His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile
 50 55 60
Ala Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp
65 70 75 80
Ser Arg Pro Glu Gln Pro Ser Pro Gln Ser Thr Pro Glu Pro Ser Pro
 85 90 95
Ser Leu Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile
 100 105 110
Asp Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr
 115 120 125
Val Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asp Leu
 130 135 140
Ser Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu
145 150 155 160
Ser Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser
 165 170 175
Asp Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His
 180 185 190
Gln Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Val Leu
 195 200 205
Asp Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys
 210 215 220
Leu Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu
225 230 235 240
Arg Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile
 245 250 255
Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile
 260 265 270
Phe Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr
 275 280 285
Pro His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu
 290 295 300
Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr
305 310 315 320
Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly
 325 330 335
Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu
 340 345 350
Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly
 355 360 365
Ser Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu
 370 375 380
Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu

385 390 395 400
Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg
405 410 415
Pro His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Arg Lys
420 425 430
Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp
435 440 445
Glu Val Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His
450 455 460
Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp
465 470 475 480
Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu
485 490 495
Ile Pro Gln Val Glu Asn Ser Val Ile Asn Ala Lys Ile Ala Asp Ala
500 505 510
Glu Ala Leu Leu Glu Lys Val Thr Asp Pro Ser Ile Arg Gln Asn Ala
515 520 525
Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys
530 535 540
Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu Leu
545 550 555 560
Lys Glu Ser Gln Pro Ala Pro Ile Gln Xaa Xaa Asn Met Gln Pro Ser
565 570 575
Gln Leu Ser Tyr Ser Ser Thr Ala Ser Asp Asn Asn Thr Gln Ser Val
580 585 590
Ala Lys Gly Ser Thr Ser Lys Pro Ala Asn Lys Ser Glu Asn Leu Gln
595 600 605
Ser Leu Leu Lys Glu Leu Tyr Asp Ser Pro Ser Ala Gln Arg Tyr Ser
610 615 620
Glu Ser Asp Gly Leu Val Phe Asp Pro Ala Lys Ile Ile Ser Arg Thr
625 630 635 640
Pro Asn Gly Val Ala Ile Pro His Gly Asp His Tyr His Phe Ile Pro
645 650 655
Tyr Ser Lys Leu Ser Ala Leu Glu Glu Lys Ile Ala Arg Met Val Pro
660 665 670
Ile Ser Gly Thr Gly Ser Thr Val Ser Thr Asn Ala Lys Pro Asn Glu
675 680 685
Val Val Ser Ser Leu Gly Ser Leu Ser Ser Asn Pro Ser Ser Leu Thr
690 695 700
Thr Ser Lys Glu Leu Ser Ser Ala Ser Asp Gly Tyr Ile Phe Asn Pro
705 710 715 720
Lys Asp Ile Val Glu Glu Thr Ala Thr Ala Tyr Ile Val Arg His Gly
725 730 735
Asp His Phe His Tyr Ile Pro Lys Ser Asn Gln Ile Gly Gln Pro Thr
740 745 750
Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu Pro Ile Asn
755 760 765
Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr Gly Phe Asp
770 775 780
Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val Met Ser His
785 790 795 800
Gly Asp His Asn His Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln
805 810 815
Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn
820 825 830
Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala
835 840 845
Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly
850 855 860
Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys
865 870 875 880
Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala Asp
885 890 895
Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn
900 905 910

Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn
915 920 925
Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys
930 935 940
Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys
945 950 955 960
Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile
965 970 975 Asn Met
Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys
980 985 990
Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe
995 1000 1005
Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile
1010 1015 1020
Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val
1025 1030 1035 1040
Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro
1045 1050 1055
Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val
1060 1065 1070
Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly
1075 1080 1085
Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro
1090 1095 1100
Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile
1105 1110 1115 1120
Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr
1125 1130 1135
Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro
1140 1145 1150
Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys
1155 1160 1165
Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys
1170 1175 1180
Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu
1185 1190 1195 1200
Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala
1205 1210 1215
Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly
1220 1225 1230
Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met
1235 1240 1245
Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro
1250 1255 1260
Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr
1265 1270 1275 1280
Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro
1285 1290 1295
Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly
1300 1305 1310
Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro
1315 1320 1325
Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr
1330 1335 1340
Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu
1345 1350 1355 1360
Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe
1365 1370 1375
Ile Ala

<210> 379
<211> 1152
<212> PRT
<213> Unknown

<220>
<223> NEW 27

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (344)...(344)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (345)...(345)
<223> Xaa = Proline or nothing

<400> 379

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Xaa Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg Leu
 1               5                  10                  15
Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val
            20                  25                  30
Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp
        35                  40                  45
Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro His
    50                  55                  60
Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala Glu
65                  70                  75                  80
Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro Pro
                85                  90                  95
Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala Glu
            100                 105                 110
Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp Arg
        115                 120                 125
Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser Leu
    130                 135                 140
Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp Phe
145                 150                 155                 160
Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu Asp Leu
                165                 170                 175
Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro His
            180                 185                 190
Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Arg Lys Asn Lys
        195                 200                 205
Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val
    210                 215                 220
Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly
225                 230                 235                 240
Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu
                245                 250                 255
Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro
            260                 265                 270
Gln Val Glu Asn Ser Val Ile Asn Ala Lys Ile Ala Asp Ala Glu Ala
        275                 280                 285
Leu Leu Glu Lys Val Thr Asp Pro Ser Ile Arg Gln Asn Ala Met Glu
    290                 295                 300
Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys Asp Asn
305                 310                 315                 320
Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu Leu Lys Glu
                325                 330                 335
Ser Gln Pro Ala Pro Ile Gln Xaa Xaa Asn Met Gln Pro Ser Gln Leu
            340                 345                 350
Ser Tyr Ser Ser Thr Ala Ser Asp Asn Asn Thr Gln Ser Val Ala Lys
        355                 360                 365
Gly Ser Thr Ser Lys Pro Ala Asn Lys Ser Glu Asn Leu Gln Ser Leu
    370                 375                 380
```

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Leu Lys Glu Leu Tyr Asp Ser Pro Ser Ala Gln Arg Tyr Ser Glu Ser
385                 390                 395                 400
Asp Gly Leu Val Phe Asp Pro Ala Lys Ile Ile Ser Arg Thr Pro Asn
                405                 410                 415
Gly Val Ala Ile Pro His Gly Asp His Tyr His Phe Ile Pro Tyr Ser
            420                 425                 430
Lys Leu Ser Ala Leu Glu Glu Lys Ile Ala Arg Met Val Pro Ile Ser
        435                 440                 445
Gly Thr Gly Ser Thr Val Ser Thr Asn Ala Lys Pro Asn Glu Val Val
    450                 455                 460
Ser Ser Leu Gly Ser Leu Ser Ser Asn Pro Ser Ser Leu Thr Thr Ser
465                 470                 475                 480
Lys Glu Leu Ser Ser Ala Ser Asp Gly Tyr Ile Phe Asn Pro Lys Asp
                485                 490                 495
Ile Val Glu Glu Thr Ala Thr Ala Tyr Ile Val Arg His Gly Asp His
            500                 505                 510
Phe His Tyr Ile Pro Lys Ser Asn Gln Ile Gly Gln Pro Thr Leu Pro
        515                 520                 525
Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu Pro Ile Asn Pro Gly
    530                 535                 540
Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr Gly Phe Asp Ala Asn
545                 550                 555                 560
Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val Met Ser His Gly Asp
                565                 570                 575
His Asn His Tyr Phe Phe Lys Lys Asp Leu Thr Glu Glu Gln Ile Lys
            580                 585                 590
Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly Leu
        595                 600                 605
Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys Glu
    610                 615                 620
Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile Met
625                 630                 635                 640
Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu Lys
                645                 650                 655
Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala Asp Pro Ile
            660                 665                 670
Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr Glu
        675                 680                 685
Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys Val
    690                 695                 700
Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn Ser
705                 710                 715                 720
Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg Val
                725                 730                 735
Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn Met
            740                 745                 750
Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val Ser
        755                 760                 765
Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu Leu
    770                 775                 780
Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala Ser
785                 790                 795                 800
Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro Thr
                805                 810                 815
Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe His
            820                 825                 830
Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro Lys
        835                 840                 845
Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn Ala
    850                 855                 860
Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile Pro
865                 870                 875                 880
Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro Val
                885                 890                 895
Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile Val
```

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            900                 905                 910
Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser Ile
        915                 920                 925
Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu Asp
    930                 935                 940
Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu Lys
945                 950                 955                 960
Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu Val
                965                 970                 975
Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu Ser
            980                 985                 990
Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr Ile
        995                 1000                1005
Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala Asp
    1010                1015                1020
Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser Glu
1025                1030                1035                1040
Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu Asn
                1045                1050                1055
Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val Lys
            1060                1065                1070
Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn Val
        1075                1080                1085
Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala Val
    1090                1095                1100
Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly Leu
1105                1110                1115                1120
Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu Arg
                1125                1130                1135
Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile Ala
            1140                1145                1150

<210> 380
 <211> 1139
<212> PRT
<213> Unknown

<220>
<223> NEW 28

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (570)...(570)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (571)...(571)
<223> Xaa = Proline or nothing

<400> 380
Xaa Glu Asn Ile Ser Ser Leu Leu Arg Glu Leu Tyr Ala Lys Pro Leu
 1                5                  10                  15
Ser Glu Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln
            20                  25                  30
Ile Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His
        35                  40                  45
Tyr His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile
    50                  55                  60
Ala Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp
65                  70                  75                  80
Ser Arg Pro Glu Gln Pro Ser Pro Gln Ser Thr Pro Glu Pro Ser Pro
                85                  90                  95
```

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Ser Leu Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile
            100                 105                 110
Asp Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr
        115                 120                 125
Val Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asp Leu
    130                 135                 140
Ser Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu
145                 150                 155                 160
Ser Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser
                165                 170                 175
Asp Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His
            180                 185                 190
Gln Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Val Leu
        195                 200                 205
Asp Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys
    210                 215                 220
Leu Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu
225                 230                 235                 240
Arg Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile
245                 250                 255
Gln Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile
            260                 265                 270
Phe Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr
        275                 280                 285
Pro His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu
    290                 295                 300
Ala Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr
305                 310                 315                 320
Pro Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly
                325                 330                 335
Ala Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu
            340                 345                 350
Asp Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly
        355                 360                 365
Ser Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu
    370                 375                 380
Trp Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu
385                 390                 395                 400
Asp Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg
                405                 410                 415
Pro His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Arg Lys
            420                 425                 430
Asn Lys Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp
        435                 440                 445
Glu Val Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His
    450                 455                 460
Ala Gly Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp
465                 470                 475                 480
Thr Glu Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu
                485                 490                 495
Ile Pro Gln Val Glu Asn Ser Val Ile Asn Ala Lys Ile Ala Asp Ala
            500                 505                 510
Glu Ala Leu Leu Glu Lys Val Thr Asp Pro Ser Ile Arg Gln Asn Ala
        515                 520                 525
Met Glu Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys
    530                 535                 540
Asp Asn Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu Leu
545                 550                 555                 560
Lys Glu Ser Gln Pro Ala Pro Ile Gln Xaa Xaa Asp Leu Thr Glu Glu
                565                 570                 575
Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His
            580                 585                 590
Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn
        595                 600                 605
Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala
```

610 615 620
Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn
625 630 635 640
Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala
645 650 655
Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser
660 665 670
Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly
675 680 685
Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu
690 695 700
Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln
705 710 715 720
Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly
725 730 735
Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu
740 745 750
Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn
755 760 765
Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr
770 775 780
Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr
785 790 795 800
Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr
805 810 815
Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala
820 825 830
Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His
835 840 845
Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu
850 855 860
Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys
865 870 875 880
Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr
885 890 895
Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys
900 905 910
Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser
915 920 925
Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu
930 935 940
Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu
945 950 955 960
Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe
965 970 975
Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp
980 985 990
Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn
995 1000 1005
Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys
1010 1015 1020
Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro
1025 1030 1035 1040
Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys
1045 1050 1055
Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu
1060 1065 1070
Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala
1075 1080 1085
Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser
1090 1095 1100
Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile
1105 1110 1115 1120
Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp
1125 1130 1135

Phe Ile Ala

<210> 381
<211> 1238
<212> PRT
<213> Unknown

<220>
<223> NEW 29

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (430)...(430)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (431)...(431)
<223> Xaa = Proline or nothing

<400> 381

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Xaa Asp Ile Asp Ser Leu Leu Lys Gln Leu Tyr Lys Leu Pro Leu Ser
 1               5                  10                  15
Gln Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln Ile
            20                  25                  30
Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His Tyr
        35                  40                  45
His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile Ala
    50                  55                  60
Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp Ser
65                  70                  75                  80
Arg Pro Glu Glu Pro Ser Pro Gln Pro Thr Pro Glu Pro Ser Pro Ser
                85                  90                  95
Pro Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile Asp
            100                 105                 110
Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr Val
        115                 120                 125
Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asn Leu Ser
    130                 135                 140
Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu Ser
145                 150                 155                 160
Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser Asp
                165                 170                 175
Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His Gln
            180                 185                 190
Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Ala Leu Asp
        195                 200                 205
Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys Leu
    210                 215                 220
Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg
225                 230                 235                 240
Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln
                245                 250                 255
Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe
            260                 265                 270
Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro
        275                 280                 285
His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala
    290                 295                 300
Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro
305                 310                 315                 320
Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala
                325                 330                 335
```

Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp
340 345 350
Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser
355 360 365
Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp
370 375 380
Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Thr Leu Glu Asp
385 390 395 400
Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro
405 410 415
His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Xaa Xaa Asn
420 425 430
Met Gln Pro Ser Gln Leu Ser Tyr Ser Ser Thr Ala Ser Asp Asn Asn
435 440 445
Thr Gln Ser Val Ala Lys Gly Ser Thr Ser Lys Pro Ala Asn Lys Ser
450 455 460
Glu Asn Leu Gln Ser Leu Leu Lys Glu Leu Tyr Asp Ser Pro Ser Ala
465 470 475 480
Gln Arg Tyr Ser Glu Ser Asp Gly Leu Val Phe Asp Pro Ala Lys Ile
485 490 495
Ile Ser Arg Thr Pro Asn Gly Val Ala Ile Pro His Gly Asp His Tyr
500 505 510
His Phe Ile Pro Tyr Ser Lys Leu Ser Ala Leu Glu Glu Lys Ile Ala
515 520 525
Arg Met Val Pro Ile Ser Gly Thr Gly Ser Thr Val Ser Thr Asn Ala
530 535 540
Lys Pro Asn Glu Val Val Ser Ser Leu Gly Ser Leu Ser Ser Asn Pro
545 550 555 560
Ser Ser Leu Thr Thr Ser Lys Glu Leu Ser Ser Ala Ser Asp Gly Tyr
565 570 575
Ile Phe Asn Pro Lys Asp Ile Val Glu Glu Thr Ala Thr Ala Tyr Ile
580 585 590
Val Arg His Gly Asp His Phe His Tyr Ile Pro Lys Ser Asn Gln Ile
595 600 605
Gly Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser
610 615 620
Leu Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly
625 630 635 640
Tyr Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe
645 650 655
Val Met Ser His Gly Asp His Asn His Tyr Phe Phe Lys Lys Asp Leu
660 665 670
Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys
675 680 685
Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr
690 695 700
Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu
705 710 715 720
Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile
725 730 735
Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His
740 745 750
His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His
755 760 765
Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys
770 775 780
Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val
785 790 795 800
Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala
805 810 815
Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys
820 825 830
Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys
835 840 845
Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn

```
    850                 855                 860
Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe
865                 870                 875                 880
Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly
                885                 890                 895
Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr
            900                 905                 910
Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro
        915                 920                 925
Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp
    930                 935                 940
Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu
945                 950                 955                 960
Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala
                965                 970                 975
Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn
            980                 985                 990
Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln
        995                 1000                1005
Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln
    1010                1015                1020
Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu
1025                1030                1035                1040
Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn
                1045                1050                1055
Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val
            1060                1065                1070
Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe
        1075                1080                1085
Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile
    1090                1095                1100
Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly
1105                1110                1115                1120
Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu
                1125                1130                1135
Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro
            1140                1145                1150
Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu
        1155                1160                1165
Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu
    1170                1175                1180
Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe
1185                1190                1195                1200
Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp
                1205                1210                1215
Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn
            1220                1225                1230
Leu Ser Asp Phe Ile Ala
        1235

<210> 382
 <211> 1365
<212> PRT
<213> Unknown

<220>
<223> NEW 30

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (557)...(557)
<223> Xaa = Glycine or nothing
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<221> VARIANT
<222> (558)...(558)
<223> Xaa = Proline or nothing

<400> 382
Xaa Asp Ile Asp Ser Leu Leu Lys Gln Leu Tyr Lys Leu Pro Leu Ser
 1 5 10 15
Gln Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln Ile
 20 25 30
Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His Tyr
 35 40 45
His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile Ala
 50 55 60
Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp Ser
65 70 75 80
Arg Pro Glu Glu Pro Ser Pro Gln Pro Thr Pro Glu Pro Ser Pro Ser
 85 90 95
Pro Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile Asp
 100 105 110
Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr Val
 115 120 125
Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asn Leu Ser
 130 135 140
Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu Ser
145 150 155 160
Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser Asp
 165 170 175
Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His Gln
 180 185 190
Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Ala Leu Asp
 195 200 205
Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys Leu
 210 215 220
Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg
225 230 235 240
Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln
 245 250 255
Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe
 260 265 270
Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro
 275 280 285
His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala
 290 295 300
Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro
305 310 315 320
Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala
 325 330 335
Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp
 340 345 350
Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser
 355 360 365
Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp
 370 375 380
Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Thr Leu Glu Asp
385 390 395 400
Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro
 405 410 415
His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Gln Arg Asn
 420 425 430
Lys Asn Gly Gln Ala Asp Thr Asn Gln Thr Glu Lys Pro Ser Glu Glu
 435 440 445
Lys Pro Gln Thr Glu Lys Pro Glu Glu Glu Thr Pro Arg Glu Glu Lys
 450 455 460
Pro Gln Ser Glu Lys Pro Glu Ser Pro Lys Pro Thr Glu Glu Pro Glu

```
465                 470                 475                 480
Glu Glu Ser Pro Glu Glu Ser Glu Glu Pro Gln Val Glu Thr Glu Lys
                485                 490                 495
Val Glu Glu Lys Leu Arg Glu Ala Glu Asp Leu Leu Gly Lys Ile Gln
            500                 505                 510
Asp Pro Ile Ile Lys Ser Asn Ala Lys Glu Thr Leu Thr Gly Leu Lys
        515                 520                 525
Asn Asn Leu Leu Phe Gly Thr Gln Asp Asn Asn Thr Ile Met Ala Glu
    530                 535                 540
Ala Glu Lys Leu Leu Ala Leu Leu Lys Glu Ser Lys Xaa Xaa Asn Met
545                 550                 555                 560
Gln Pro Ser Gln Leu Ser Tyr Ser Ser Thr Ala Ser Asp Asn Asn Thr
                565                 570                 575
Gln Ser Val Ala Lys Gly Ser Thr Ser Lys Pro Ala Asn Lys Ser Glu
            580                 585                 590
Asn Leu Gln Ser Leu Leu Lys Glu Leu Tyr Asp Ser Pro Ser Ala Gln
        595                 600                 605
Arg Tyr Ser Glu Ser Asp Gly Leu Val Phe Asp Pro Ala Lys Ile Ile
    610                 615                 620
Ser Arg Thr Pro Asn Gly Val Ala Ile Pro His Gly Asp His Tyr His
625                 630                 635                 640
Phe Ile Pro Tyr Ser Lys Leu Ser Ala Leu Glu Glu Lys Ile Ala Arg
                645                 650                 655
Met Val Pro Ile Ser Gly Thr Gly Ser Thr Val Ser Thr Asn Ala Lys
            660                 665                 670
Pro Asn Glu Val Val Ser Ser Leu Gly Ser Leu Ser Ser Asn Pro Ser
        675                 680                 685
Ser Leu Thr Thr Ser Lys Glu Leu Ser Ser Ala Ser Asp Gly Tyr Ile
    690                 695                 700
Phe Asn Pro Lys Asp Ile Val Glu Glu Thr Ala Thr Ala Tyr Ile Val
705                 710                 715                 720
Arg His Gly Asp His Phe His Tyr Ile Pro Lys Ser Asn Gln Ile Gly
                725                 730                 735
Gln Pro Thr Leu Pro Asn Asn Ser Leu Ala Thr Pro Ser Pro Ser Leu
            740                 745                 750
Pro Ile Asn Pro Gly Thr Ser His Glu Lys His Glu Glu Asp Gly Tyr
        755                 760                 765
Gly Phe Asp Ala Asn Arg Ile Ile Ala Glu Asp Glu Ser Gly Phe Val
    770                 775                 780
Met Ser His Gly Asp His Asn His Tyr Phe Phe Lys Lys Asp Leu Thr
785                 790                 795                 800
Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr
                805                 810                 815
Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro
            820                 825                 830
Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys
        835                 840                 845
Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val
    850                 855                 860
Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His
865                 870                 875                 880
His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser
                885                 890                 895
His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys
            900                 905                 910
Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn
        915                 920                 925
Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn
    930                 935                 940
Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys
945                 950                 955                 960
Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val
                965                 970                 975
Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile
            980                 985                 990
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Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys
        995                 1000                1005
Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr
    1010                1015                1020
Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile
1025                1030                1035                1040
Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln
                1045                1050                1055
Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu
            1060                1065                1070
Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile
        1075                1080                1085
Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly
    1090                1095                1100
Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln
1105                1110                1115                1120
Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr
                1125                1130                1135
Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu
            1140                1145                1150
Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys
        1155                1160                1165
Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser
    1170                1175                1180
Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala
1185                1190                1195                1200
Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn
                1205                1210                1215
Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys
            1220                1225                1230
Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu
        1235                1240                1245
Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn
    1250                1255                1260
Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn
1265                1270                1275                1280
Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn
                1285                1290                1295
Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu
            1300                1305                1310
Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr
        1315                1320                1325
Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly
    1330                1335                1340
Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu
1345                1350                1355                1360
Ser Asp Phe Ile Ala
                1365

<210> 383
 <211> 1126
<212> PRT
<213> Unknown

<220>
<223> NEW 31

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (557)...(557)
<223> Xaa = Glycine or nothing
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<221> VARIANT
<222> (558)...(558)
<223> Xaa = Proline or nothing

<400> 383
Xaa Asp Ile Asp Ser Leu Leu Lys Gln Leu Tyr Lys Leu Pro Leu Ser
 1 5 10 15
Gln Arg His Val Glu Ser Asp Gly Leu Ile Phe Asp Pro Ala Gln Ile
 20 25 30
Thr Ser Arg Thr Ala Arg Gly Val Ala Val Pro His Gly Asn His Tyr
 35 40 45
His Phe Ile Pro Tyr Glu Gln Met Ser Glu Leu Glu Lys Arg Ile Ala
 50 55 60
Arg Ile Ile Pro Leu Arg Tyr Arg Ser Asn His Trp Val Pro Asp Ser
65 70 75 80
Arg Pro Glu Glu Pro Ser Pro Gln Pro Thr Pro Glu Pro Ser Pro Ser
 85 90 95
Pro Gln Pro Ala Pro Asn Pro Gln Pro Ala Pro Ser Asn Pro Ile Asp
 100 105 110
Glu Lys Leu Val Lys Glu Ala Val Arg Lys Val Gly Asp Gly Tyr Val
 115 120 125
Phe Glu Glu Asn Gly Val Ser Arg Tyr Ile Pro Ala Lys Asn Leu Ser
 130 135 140
Ala Glu Thr Ala Ala Gly Ile Asp Ser Lys Leu Ala Lys Gln Glu Ser
145 150 155 160
Leu Ser His Lys Leu Gly Ala Lys Lys Thr Asp Leu Pro Ser Ser Asp
 165 170 175
Arg Glu Phe Tyr Asn Lys Ala Tyr Asp Leu Leu Ala Arg Ile His Gln
 180 185 190
Asp Leu Leu Asp Asn Lys Gly Arg Gln Val Asp Phe Glu Ala Leu Asp
 195 200 205
Asn Leu Leu Glu Arg Leu Lys Asp Val Ser Ser Asp Lys Val Lys Leu
 210 215 220
Val Asp Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg
225 230 235 240
Leu Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln
 245 250 255
Val Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe
 260 265 270
Asp Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro
 275 280 285
His Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala
 290 295 300
Glu Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro
305 310 315 320
Pro Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala
 325 330 335
Glu Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp
 340 345 350
Arg Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser
 355 360 365
Leu Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp
 370 375 380
Phe Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Thr Leu Glu Asp
385 390 395 400
Leu Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro
 405 410 415
His Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Gln Arg Asn
 420 425 430
Lys Asn Gly Gln Ala Asp Thr Asn Gln Thr Glu Lys Pro Ser Glu Glu
 435 440 445
Lys Pro Gln Thr Glu Lys Pro Glu Glu Glu Thr Pro Arg Glu Glu Lys
 450 455 460
Pro Gln Ser Glu Lys Pro Glu Ser Pro Lys Pro Thr Glu Glu Pro Glu
465 470 475 480

Glu Glu Ser Pro Glu Glu Ser Glu Glu Pro Gln Val Glu Thr Glu Lys
485 490 495
Val Glu Glu Lys Leu Arg Glu Ala Glu Asp Leu Leu Gly Lys Ile Gln
500 505 510
Asp Pro Ile Ile Lys Ser Asn Ala Lys Glu Thr Leu Thr Gly Leu Lys
515 520 525
Asn Asn Leu Leu Phe Gly Thr Gln Asp Asn Asn Thr Ile Met Ala Glu
530 535 540
Ala Glu Lys Leu Leu Ala Leu Leu Lys Glu Ser Lys Xaa Xaa Asp Leu
545 550 555 560
Thr Glu Glu Gln Ile Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys
565 570 575
Thr Ser His Asn Gly Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr
580 585 590
Pro Gly Asn Ala Lys Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu
595 600 605
Lys Ile Ala Gly Ile Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile
610 615 620
Val Val Asn Lys Glu Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His
625 630 635 640
His His Ala Asp Pro Ile Asp Glu His Lys Pro Val Gly Ile Gly His
645 650 655
Ser His Ser Asn Tyr Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys
660 665 670
Lys Glu Gly Asn Lys Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val
675 680 685
Asn Leu Leu Lys Asn Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala
690 695 700
Asn Gly Gln Lys Arg Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys
705 710 715 720
Lys Leu Gly Ile Asn Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys
725 730 735
Val Leu Glu Lys Val Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn
740 745 750
Ile Ala Asn Phe Glu Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe
755 760 765
Lys Tyr Thr Ile Ala Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly
770 775 780
Thr Phe Thr Val Pro Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr
785 790 795 800
Ile Phe Tyr Pro Phe His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro
805 810 815
Gln Phe Ala Val Pro Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp
820 825 830
Glu Phe His Gly Asn Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu
835 840 845
Ile Lys Leu Pro Ile Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala
850 855 860
Gly Asn Lys Ile Pro Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn
865 870 875 880
Gln Ser Thr Tyr Ile Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln
885 890 895
Thr Asp Lys Pro Ser Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln
900 905 910
Glu Asn Ser Lys Leu Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu
915 920 925
Lys Val Glu Lys Glu Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn
930 935 940
Ser Thr Leu Glu Glu Val Pro Thr Val Asp Pro Val Gln Glu Lys Val
945 950 955 960
Ala Lys Phe Ala Glu Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe
965 970 975
Asn Met Asp Gly Thr Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile
980 985 990
Lys Lys Asn Met Ala Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly

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        995                 1000                1005
Glu Asn Lys Pro Ser Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu
    1010                1015                1020
Asn Gln Pro Thr Glu Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro
1025                1030                1035                1040
Asn Glu Lys Pro Val Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu
                1045                1050                1055
Asn Pro Glu Gly Asn Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu
            1060                1065                1070
Glu Glu Ala Pro Ala Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe
        1075                1080                1085
Thr Ala Ser Tyr Gly Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp
    1090                1095                1100
Gly Thr Ile Glu Leu Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn
1105                1110                1115                1120
Leu Ser Asp Phe Ile Ala
                1125
<210> 384
 <211> 913
<212> PRT
<213> Unknown

<220>
<223> NEW 32

<221> VARIANT
<222> (1)...(1)
<223> Xaa = Methionine or nothing

<221> VARIANT
<222> (344)...(344)
<223> Xaa = Glycine or nothing

<221> VARIANT
<222> (345)...(345)
<223> Xaa = Proline or nothing

<400> 384
Xaa Asp Ile Leu Ala Phe Leu Ala Pro Ile Arg His Pro Glu Arg Leu
 1               5                  10                  15
Gly Lys Pro Asn Ala Gln Ile Thr Tyr Thr Asp Asp Glu Ile Gln Val
            20                  25                  30
Ala Lys Leu Ala Gly Lys Tyr Thr Thr Glu Asp Gly Tyr Ile Phe Asp
        35                  40                  45
Pro Arg Asp Ile Thr Ser Asp Glu Gly Asp Ala Tyr Val Thr Pro His
    50                  55                  60
Met Thr His Ser His Trp Ile Lys Lys Asp Ser Leu Ser Glu Ala Glu
65                  70                  75                  80
Arg Ala Ala Ala Gln Ala Tyr Ala Lys Glu Lys Gly Leu Thr Pro Pro
                85                  90                  95
Ser Thr Asp His Gln Asp Ser Gly Asn Thr Glu Ala Lys Gly Ala Glu
            100                 105                 110
Ala Ile Tyr Asn Arg Val Lys Ala Ala Lys Lys Val Pro Leu Asp Arg
        115                 120                 125
Met Pro Tyr Asn Leu Gln Tyr Thr Val Glu Val Lys Asn Gly Ser Leu
    130                 135                 140
Ile Ile Pro His Tyr Asp His Tyr His Asn Ile Lys Phe Glu Trp Phe
145                 150                 155                 160
Asp Glu Gly Leu Tyr Glu Ala Pro Lys Gly Tyr Ser Leu Glu Asp Leu
                165                 170                 175
Leu Ala Thr Val Lys Tyr Tyr Val Glu His Pro Asn Glu Arg Pro His
            180                 185                 190
Ser Asp Asn Gly Phe Gly Asn Ala Ser Asp His Val Arg Lys Asn Lys
        195                 200                 205
Ala Asp Gln Asp Ser Lys Pro Asp Glu Asp Lys Glu His Asp Glu Val
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    210                 215                 220
Ser Glu Pro Thr His Pro Glu Ser Asp Glu Lys Glu Asn His Ala Gly
225                 230                 235                 240
Leu Asn Pro Ser Ala Asp Asn Leu Tyr Lys Pro Ser Thr Asp Thr Glu
                245                 250                 255
Glu Thr Glu Glu Glu Ala Glu Asp Thr Thr Asp Glu Ala Glu Ile Pro
            260                 265                 270
Gln Val Glu Asn Ser Val Ile Asn Ala Lys Ile Ala Asp Ala Glu Ala
        275                 280                 285
Leu Leu Glu Lys Val Thr Asp Pro Ser Ile Arg Gln Asn Ala Met Glu
    290                 295                 300
Thr Leu Thr Gly Leu Lys Ser Ser Leu Leu Leu Gly Thr Lys Asp Asn
305                 310                 315                 320
Asn Thr Ile Ser Ala Glu Val Asp Ser Leu Leu Ala Leu Leu Lys Glu
                325                 330                 335
Ser Gln Pro Ala Pro Ile Gln Xaa Xaa Asp Leu Thr Glu Glu Gln Ile
            340                 345                 350
Lys Ala Ala Gln Lys His Leu Glu Glu Val Lys Thr Ser His Asn Gly
        355                 360                 365
Leu Asp Ser Leu Ser Ser His Glu Gln Asp Tyr Pro Gly Asn Ala Lys
    370                 375                 380
Glu Met Lys Asp Leu Asp Lys Lys Ile Glu Glu Lys Ile Ala Gly Ile
385                 390                 395                 400
Met Lys Gln Tyr Gly Val Lys Arg Glu Ser Ile Val Val Asn Lys Glu
                405                 410                 415
Lys Asn Ala Ile Ile Tyr Pro His Gly Asp His His His Ala Asp Pro
            420                 425                 430
Ile Asp Glu His Lys Pro Val Gly Ile Gly His Ser His Ser Asn Tyr
        435                 440                 445
Glu Leu Phe Lys Pro Glu Glu Gly Val Ala Lys Lys Glu Gly Asn Lys
    450                 455                 460
Val Tyr Thr Gly Glu Glu Leu Thr Asn Val Val Asn Leu Leu Lys Asn
465                 470                 475                 480
Ser Thr Phe Asn Asn Gln Asn Phe Thr Leu Ala Asn Gly Gln Lys Arg
                485                 490                 495
Val Ser Phe Ser Phe Pro Pro Glu Leu Glu Lys Lys Leu Gly Ile Asn
            500                 505                 510
Met Leu Val Lys Leu Ile Thr Pro Asp Gly Lys Val Leu Glu Lys Val
        515                 520                 525
Ser Gly Lys Val Phe Gly Glu Gly Val Gly Asn Ile Ala Asn Phe Glu
    530                 535                 540
Leu Asp Gln Pro Tyr Leu Pro Gly Gln Thr Phe Lys Tyr Thr Ile Ala
545                 550                 555                 560
Ser Lys Asp Tyr Pro Glu Val Ser Tyr Asp Gly Thr Phe Thr Val Pro
                565                 570                 575
Thr Ser Leu Ala Tyr Lys Met Ala Ser Gln Thr Ile Phe Tyr Pro Phe
            580                 585                 590
His Ala Gly Asp Thr Tyr Leu Arg Val Asn Pro Gln Phe Ala Val Pro
        595                 600                 605
Lys Gly Thr Asp Ala Leu Val Arg Val Phe Asp Glu Phe His Gly Asn
    610                 615                 620
Ala Tyr Leu Glu Asn Asn Tyr Lys Val Gly Glu Ile Lys Leu Pro Ile
625                 630                 635                 640
Pro Lys Leu Asn Gln Gly Thr Thr Arg Thr Ala Gly Asn Lys Ile Pro
                645                 650                 655
Val Thr Phe Met Ala Asn Ala Tyr Leu Asp Asn Gln Ser Thr Tyr Ile
            660                 665                 670
Val Glu Val Pro Ile Leu Glu Lys Glu Asn Gln Thr Asp Lys Pro Ser
        675                 680                 685
Ile Leu Pro Gln Phe Lys Arg Asn Lys Ala Gln Glu Asn Ser Lys Leu
    690                 695                 700
Asp Glu Lys Val Glu Glu Pro Lys Thr Ser Glu Lys Val Glu Lys Glu
705                 710                 715                 720
Lys Leu Ser Glu Thr Gly Asn Ser Thr Ser Asn Ser Thr Leu Glu Glu
                725                 730                 735
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Val Pro Thr Val Asp Pro Val Gln Glu Lys Val Ala Lys Phe Ala Glu
740 745 750
Ser Tyr Gly Met Lys Leu Glu Asn Val Leu Phe Asn Met Asp Gly Thr
755 760 765
Ile Glu Leu Tyr Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Met Ala
770 775 780
Asp Phe Thr Gly Glu Ala Pro Gln Gly Asn Gly Glu Asn Lys Pro Ser
785 790 795 800
Glu Asn Gly Lys Val Ser Thr Gly Thr Val Glu Asn Gln Pro Thr Glu
805 810 815
Asn Lys Pro Ala Asp Ser Leu Pro Glu Ala Pro Asn Glu Lys Pro Val
820 825 830
Lys Pro Glu Asn Ser Thr Asp Asn Gly Met Leu Asn Pro Glu Gly Asn
835 840 845
Val Gly Ser Asp Pro Met Leu Asp Pro Ala Leu Glu Glu Ala Pro Ala
850 855 860
Val Asp Pro Val Gln Glu Lys Leu Glu Lys Phe Thr Ala Ser Tyr Gly
865 870 875 880
Leu Gly Leu Asp Ser Val Ile Phe Asn Met Asp Gly Thr Ile Glu Leu
885 890 895
Arg Leu Pro Ser Gly Glu Val Ile Lys Lys Asn Leu Ser Asp Phe Ile
900 905 910
Ala